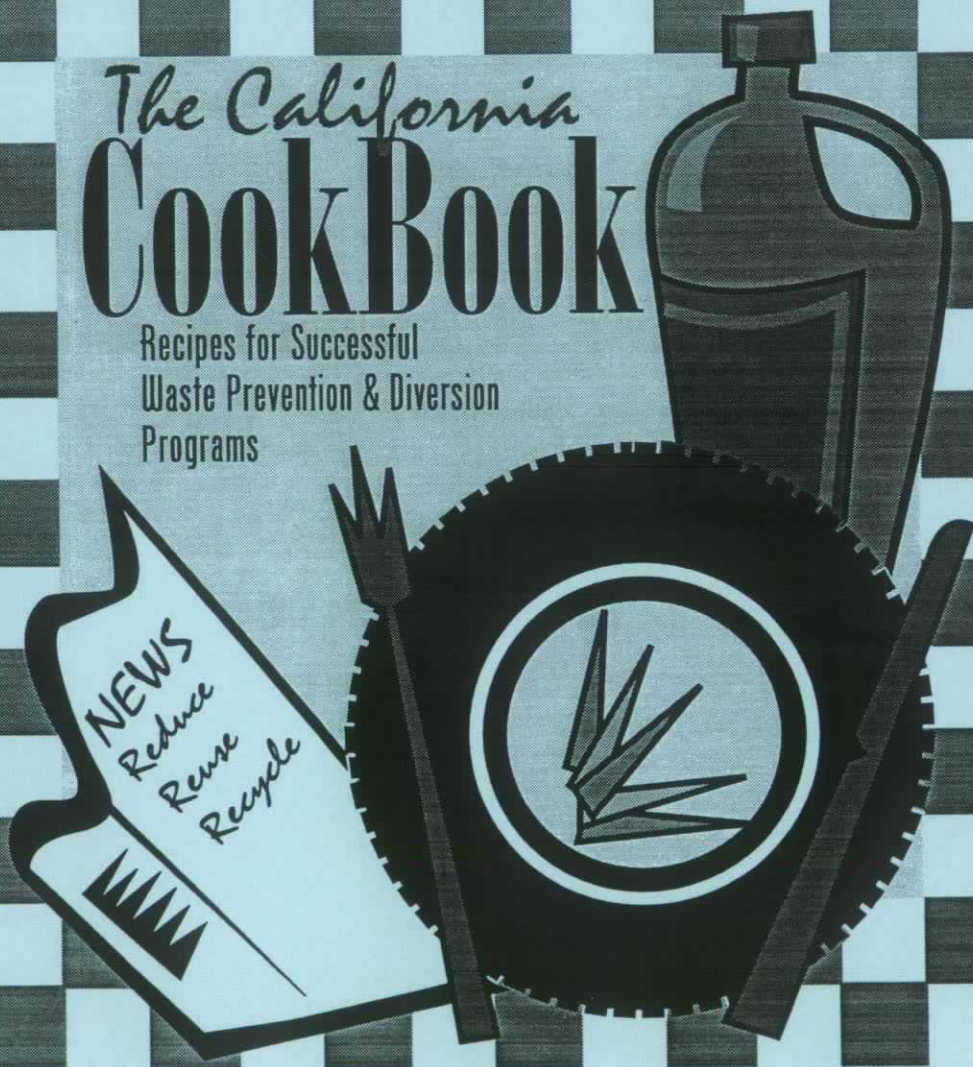


# The California CookBook

Recipes for Successful  
Waste Prevention & Diversion  
Programs



**State of California**

Pete Wilson  
Governor

James M. Strock  
Secretary for Environmental Protection  
California Environmental Protection Agency

**California Integrated Waste Management Board**

Jesse R. Huff  
Chairman

Wesley Chesbro  
Vice Chairman

Sam A. Egigian

Kathy Neal

Paul Relis

Ralph E. Chandler  
Executive Director

March 1994

California Integrated Waste Management Board  
8800 Cal Center Drive  
Sacramento, California 95826  
(916) 255-2200

## **ACKNOWLEDGMENTS**

This manual was written under the direction of the Local Assistance and Planning Committee of the California Integrated Waste Management Board.

### **Committee Members**

Wesley Chesbro (Chairman)

Jesse R. Huff

Kathy Neal

### **Office of Local Assistance**

Judith J. Friedman, Manager

John Nuffer, Supervisor Northern Unit

### **Project Director**

John S. Brooks, Northern Unit

### **Principal Researchers/Authors**

Eric Bissinger

Lynne Cody

Ken Decio

Kathy Frevert

Jeff Hackett

Jerry Hart

Kenneth Hughes

Jeff Hunts

Patricia Jones

Soheila Khoii

Ila Lewis

Cathy Love

Cara Morgan

Janet Page

Brenda Saldana

Yasmin Satter

Stacie Sormano

Darla Tate

Debra Taubitz

Ellen Wertheimer

Brad Williams

### **Graphic Designer**

Diane O'leary



## TABLE OF CONTENTS

### I. Introduction

### II. Waste Prevention and Reuse Programs

Introduction .....	II-1
1) County Courthouse and Garages .....	II-2
2) Manufacturing .....	II-4
3) Hospital .....	II-5
4) Newspaper Office .....	II-7
5) Reduced Volume-Based Trash Disposal Fees .....	II-8
6) Retail Waste Prevention .....	II-9
7) Concrete Additives .....	II-10
8) "Drop And Swap"- Reuse Event .....	II-11
9) Holiday/Greeting Card Reuse .....	II-12
10) Nursery Reuse .....	II-13

### III. Recycling & Composting Programs

Introduction .....	III-1
--------------------	-------

#### *Business Recycling Programs*

1) Materials Recovery Facility/Disabled Citizens Work Program .....	III-4
2) Schuller International Manufacturing .....	III-5
3) Yakima Products Manufacturing .....	III-6
4) Fair Recycling .....	III-7
5) Restaurant Recycling .....	III-9
6) Private Materials Recovery Facility .....	III-10
7) Newsprint Remanufacturing .....	III-11
8) Cow Mattresses .....	III-12
9) Animal Newspaper Bedding .....	III-13
10) Food Waste Recovery/Hog Feeding .....	III-14



### *Institutional Recycling Programs*

- 1) School Recycling: Laytonville, Calif. .... IIIA-2
- 2) School Recycling & Waste Prevention: Placerville, Calif. .... IIIA-4
- 3) School Recycling: Kneeland, Calif. .... IIIA-6
- 4) School Recycling: Montague, Calif. .... IIIA-8
- 5) School Recycling: Etna, Calif. .... IIIA-9
- 6) School Recycling: Penn Valley, Calif. .... IIIA-10
- 7) School Recycling: Markleeville, Calif. .... IIIA-11
- 8) School Recycling: San Andreas, Calif. .... IIIA-12
- 9) Prison Recycling .... IIIA-14

### *Community Recycling Programs*

- 1) Community Recycling: Molokai, Hawaii .... IIIB-2
- 2) Community Recycling: Imperial, Nebraska .... IIIB-3
- 3) Dropoff Facility .... IIIB-4
- 4) Town Recycling Center..... IIIB-5
- 5) One-Stop Dropoff & Processing of Recyclables .... IIIB-7

### *Regional Recycling Programs*

- 1) Regional Recycling Program .... IIIC-2
- 2) 13-County Regional Recycling .... IIIC-3
- 3) Bi-County Transfer-Recycling Facility .... IIIC-5
- 4) Non-Profit Regional Recycling Center .... IIIC-6
- 5) Private Recycling/Processing Facility .... IIIC-7
- 6) Regional Recycling & Cooperative Marketing .... IIIC-8

### *Composting/Mulching*

- 1) Crab & Fish Waste Composting .... IIID-2
- 2) Crab Waste Composting .... IIID-3
- 3) Mixed Waste Composting .... IIID-4
- 4) Christmas Tree Mulching .... IIID-5
- 5) Lawn Mulching .... IIID-6
- 6) Pine Needle Diversion .... IIID-8



#### IV. Household Hazardous Waste

- 1) Collection Events: Greenfield, Mass. .... IV-2
- 2) Collection Events: Humboldt County, Calif. .... IV-3
- 3) Collection Events: Shasta County, Calif. .... IV-4
- 4) Collection Events: El Dorado County, Calif. .... IV-5
- 5) Collection Events: Yolo County, Calif. .... IV-6
- 6) Permanent Collection Facility: Merced County, Calif. .... IV-7

#### V. Financing Integrated Waste Management Programs

##### Introduction

- 1) Sources of Operating Revenues ..... V-2
- 2) Developing Markets for Recyclables ..... V-3

##### Grants

- 1) Solid Waste Management Assistance ..... VA-2
- 2) Environmental Education Grants Program ..... VA-3
- 3) Enforcement Assistance Grant Program ..... VA-5
- 4) Local Technical Assistance Program ..... VA-6
- 5) Long-Term Economic Deterioration Program ..... VA-7
- 6) Sudden and Severe Economic Dislocation (SSED)  
Economic Adjustment Program ..... VA-9
- 7) Planning Program for Economic Development Districts, Indian  
Tribes and Redevelopment Areas ..... VA-11
- 8) Public Works and Development Facilities Program ..... VA-13
- 9) Water and Waste Disposal Grants ..... VA-15
- 10) Rural Business Enterprise Grants ..... VA-16
- 11) Recycling, Public Education and Litter Reduction Grant ..... VA-17
- 12) Developmentally Disabled Program Development Program ..... VA-18
- 13) Community Development Block Grant/Economic Development Allocation ..... VA-19
- 14) Community Development Block Grant/Community And Economic Development  
Planning-Technical Assistance Allocation ..... VA-20



## Loans

- 1) Community Development Block Grant/Revolving Loan Fund ..... VB-2
- 2) Community Development Block Grant/Revolving Loan Fund ..... VB-3
- 2) Community Facility Loans ..... VB-4
- 3) Intermediary Relending Program Loans ..... VB-6
- 4) Water and Waste Disposal Loans ..... VB-7
- 5) Energy Technologies Advancement Program ..... VB-9
- 6) California Loans for Environmental Assistance Now ..... VB-10
- 7) Capital Access Program ..... VB-11
- 8) Pollution Control and Waste Disposal Facilities  
Small Business Assistance Fund ..... VB-12
- 9) Recycling Market Development Zone (RMDZ) Loan Program ..... VB-13
- 10) Community Facility Guaranteed Loans ..... VB-14
- 11) Water and Waste Disposal Loan Guarantees ..... VB-15

## Glossary

## Index

## Appendix

CCR 18775

Inyo County Petition

Board Agenda Item for Inyo Petition

## INTRODUCTION

Almost 87 percent of California's municipal solid waste is sent to landfills which are rapidly reaching capacity. New environmentally safe landfills are difficult to site and expensive to construct and maintain. In response to this problem, the legislature passed California's Integrated Waste Management Act of 1989 (Act). The Act mandates that each county and city devise a plan to reduce the amount of waste it disposes of by 25 percent by 1995 and 50 percent by the year 2000. As rural jurisdictions began to develop their plans, many became concerned that they would be unable to meet the mandates of the Act.

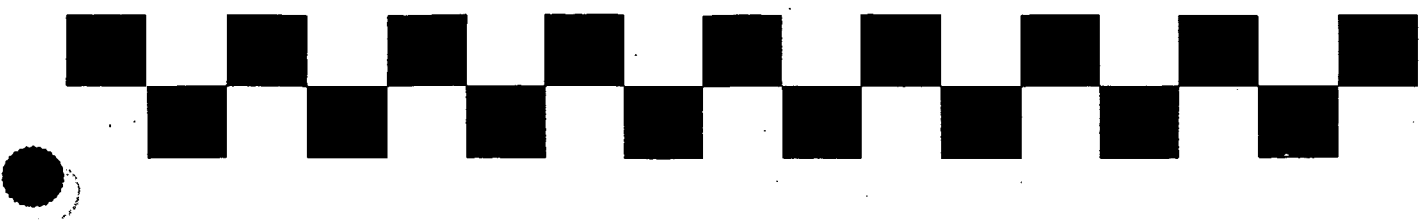
To help rural cities and counties in this effort, the legislature required the California Integrated Waste Management Board (CIWMB) through Public Resources Code (PRC) Section 41826 to conduct a study on waste diversion in rural areas. The results were published as *Waste Diversion in Rural California* in September 1991. The County Supervisors Association of California's (CSAC) definition of rural county — a county with a population of 200,000 or less — was adopted for this report.

In continuing to address the concerns of rural jurisdictions, the legislature directed the CIWMB through Assembly Bill 2494 (PRC Section 40914) to develop model programs and materials to assist rural counties and cities in meeting the state mandates for waste reduction. With input from rural jurisdictions, the CIWMB decided to focus on programs that have been successfully implemented in rural jurisdictions throughout the United States; innovative financing sources; and the possibilities of partnerships between jurisdictions. For consistency, it was also decided that the CSAC definition of rural counties would again be used.

The result of this effort is *The Rural Cookbook: Recipes for Successful Waste Prevention and Diversion Programs*. The "Cookbook" introduces jurisdictions to a range of new possibilities which may be used in designing their waste management systems. The reader can browse through the Cookbook or use the index in the back to find a specific material type or program. The Cookbook focuses on programs that have already been successfully implemented in rural areas, but it also includes other programs that might be helpful. For example, a number of funding programs included here, have never been utilized for waste management activities; however, if a funding agency felt that a program could be used in this manner it was included.

Common themes throughout "Cookbook" programs include volunteerism, common sense approaches, cooperative efforts, and creativity. Cooperative efforts between jurisdictions, with private businesses and large generators were key in making many of these programs successful. Programs often relied on more than one of these variables to make them successful.

At the inception of the "Cookbook", staff contacted the Executive Director of the Regional Council of Rural Counties (RCRC) to determine if a compendium of successful programs would be useful for rural jurisdictions. The Executive Director then invited us to present our concept at the next meeting. We received a favorable response from the attending members. As a result of that meeting, a survey was sent out to all rural jurisdictions in California to help identify their major areas of concern. The survey was then used to help in targeting those areas in the "Cookbook".



Staff also sent out a survey to the waste management departments of the other states asking for information on programs that have been implemented in their rural jurisdictions. Once a state identified a program, the program's designated representative was contacted for permission to include their program in our "Cookbook". Those programs which were included contained a good general description, a contact person, and a phone number. Where possible information on amounts of material diverted from landfilling, program costs and savings, and markets was included. However, for a number of programs, diversion tonnages or cost figures were not available, and a few businesses were reluctant to discuss their proprietary markets. Some programs are unique, while many are not. If a number of rural jurisdictions were able to support a similar program, then it may be relatively easy to develop in other rural jurisdictions. The "Cookbook" may include clusters of programs from the same jurisdiction or region. This is because some local staff spent a considerable amount of time to document their programs. Other jurisdictions may also have a number of programs, but their staff did not have the time to help develop the case studies to the same extent for the "Cookbook".

Many of the California programs were suggested and presented by Board staff who were familiar with the programs. The funding section includes a summary of the program, the total annual amount available in California, the amount available for any one program, a contact person, and a phone number to call for more information. Staff researched potential funding sources for waste management programs, looking for programs that traditionally are not tapped. The appendix includes a copy of CCR Section 18775 with the criteria for receiving a reduction in planning and diversion requirements, a successful petition, and the corresponding Board agenda item.

The "Cookbook" is compiled using a looseleaf binder so that new information and programs can be easily added as they become available. The first addition to be added to the "Cookbook" will be finished in the summer of 1994. The CIWMB is in the process of developing models for jurisdictions that want to assess the possibilities of sharing facilities. Using the models will enable jurisdictions to look at different waste management facility scenarios to determine if sharing facilities would be beneficial. The models will be mailed to each jurisdiction to be inserted into the "Cookbook" as soon as they have been completed and field tested.

There are many more successful waste prevention and diversion programs operating in rural America and California that are not documented here. However, the "Cookbook" will be updated as resources allow. Our intent is not to promote any particular programs or companies described, but to provide information and contacts for assessing the feasibility of a program and its potential applicability to your jurisdiction. Happy "Cooking"!





## **II. WASTE PREVENTION AND REUSE PROGRAMS**

### **INTRODUCTION**

Waste prevention is the highest priority in California's integrated waste management hierarchy. Ideally, individuals, organizations, and businesses should eliminate waste wherever possible in the products or packaging they buy, use, make, or sell. Waste prevention reduces waste management costs and the pollution generated by collecting, processing, recycling, incinerating, and landfilling discards. Waste prevention also conserves natural resources and valuable landfill space. It can add years to the expected lifespan of a landfill, reduce pollution, and encourage innovation.

Waste prevention - also known as source reduction is defined as: Any action undertaken by an individual or organization to eliminate or reduce the amount or toxicity of materials before they enter the municipal solid waste stream. This action is intended to conserve resources, promote efficiency, and reduce pollution.

The goal of waste prevention is to encourage production processes and consumer choices that are efficient and that conserve resources. Waste prevention often encourages innovation and creativity. For instance, many businesses have found that when new ways are identified of reducing waste and using resources more efficiently, improved products or packaging emerge. In this way, waste prevention can help California businesses in competing effectively in national and international markets.



## COUNTY COURTHOUSE AND GARAGES

### WASTE TYPES:

Primarily plastic and paper products, junk mail, filters, paint, and cleaning chemicals.

### PROGRAM LOCATION:


Grand Rapids, population 42,000, is located in north-central Minnesota and is known for its forests and scenic waterways. Major industries are timber and tourism. Markets can be over a hundred miles away.

### PROGRAM SUMMARY:

In 1989, Itasca County government made a commitment to reduce its waste stream. Waste that could not be prevented was targeted for recycling. Since then, staff in the courthouse and in the road and bridge departments has reduced the amount of waste generated by approximately 13 percent, with annual savings averaging \$46,000.

Essential elements of this program are: support from elected officials, a team approach that involves all employees, waste prevention education for all employees, and monitoring and documenting the results. The following waste prevention practices were adopted:

- Use of reusable forced-air filters instead of disposable ones. In county garages the new filters are made of aluminum and are washed with high-pressure water equipment. In the courthouse, a reusable steel frame with a disposable filter medium is used.
- Use of reusable cups by staff and visitors. The coffee shop in the courthouse charges 5 cents extra for beverages served in disposable cups.
- Reduction of duplicate and unwanted mail. Pre-printed post cards asking to be taken off mailing lists are sent to direct mail companies.
- Use of reusable cloth roll towels instead of single-use paper.
- Promote double-sided copies. Courthouse employees placed signs by copy machines reminding users to make double-sided copies.
- Use of scratch pads made from paper used on only one side.
- Use of fluorescent lighting in exit signs. Additionally, 3M Silverlux reflectors were installed in fluorescent ceiling fixtures. This reduced the number of 4-ft bulbs needed for each fixture, annual cost savings for the lighting changes are about \$7,700.

- 
- Use of soap and water as a degreaser to clean engines and equipment instead of a chemical solvent.
  - Reuse of heavyweight equipment air filters common in road graders and large trucks. These are professionally cleaned and can be reused three or four times.
  - Limiting painting of rebuilt road equipment. Although equipment does not look "new," it is kept in good operating condition.
  - Use of long-life repairable products. For example, the county purchases one high-quality brand of chainsaws so parts are interchangeable. Repairs are easier to make, which saves time and money.

**CONTACT: MINNESOTA OFFICE OF WASTE MANAGEMENT  
1350 ENERGY LANE  
ST. PAUL, MN 55108  
(612) 649-5482**



## **MANUFACTURING**

### **WASTE TYPES:**

Packaging materials, cardboard boxes, junk mail, paper, and pallets.

### **PROGRAM LOCATION:**

Colchester, population 15,000, is a growing rural community on the shore of Lake Champlain in Vermont. There are five large farming operations in the area and the City has experienced rapid growth in the last five years.

### **PROGRAM SUMMARY:**

Seventh Generation is a five-year-old company with 70 employees and \$6.5 million in catalog sales per year. Products include natural clothing, cleaning products, recycled paper products, non-toxic cleaning products, energy-efficient home products, and water saving devices.

Seventh Generation purchases used Heath Bar boxes from Ben & Jerry's Heath Bar Crunch Ice Cream for five cents each. They are also working with a new company in Vermont called REBOX, to purchase additional used corrugated containers. Seventh Generation has also been working with vendors to reduce packing and packaging. Traditional packing material, such as styrofoam peanuts, have been replaced with shredded roll ends from printers and shredded third class mail ("junk mail"). The warehouse does not purchase new pallets; they reuse incoming pallets and have broken ones rebuilt or sent to a wood chip energy facility. In the office, outdated stationary is made into message pads and the copy machine has double-sided capability. Ten percent of the packages sent out by its warehouse are reused vendor boxes. This translates to a savings of \$3,000 annually (reuse of 10,000 boxes/year at 30 cents/box).

The company won the Direct Marketing Association Environmental Achievement Award in 1991, 1992 and 1993 and the Governor of Vermont's Closing the Loop Award in 1992. The award is given for procurement of recycled products.

**CONTACT: PHIL GIRTON  
SEVENTH GENERATION  
49 HERCULES DRIVE  
COLCHESTER, VT 05446  
(802) 655-6777 EXT.610**



## HOSPITAL

### WASTE TYPES:

Primarily plastic and paper products.


### PROGRAM LOCATION:

Grand Rapids, population 42,000, is located in north-central Minnesota and is known for its forests and scenic waterways. Major industries are timber and tourism. Markets can be over a hundred miles away.

### PROGRAM SUMMARY:

Itasca Medical Center is a 108-bed hospital with an attached 35-bed convalescent nursing care facility. A staff reduction recycling team examined the hospital's waste stream and brainstormed ideas to accomplish a reduction in waste disposal and ease pressure on the community landfill. The following waste prevention programs were implemented:

- Switching from disposable to reusable salad bar plates in the cafeteria.
- Using small ceramic dessert dishes instead of single-use plastic ones on patient trays.
- Using washable water pitchers for patients.
- Changing to half-pint milk pouches from gable-top milk cartons.
- Replacing "egg-crate" mattresses with long-lasting mattresses.
- Using one circular light bulb tube in x-ray view boxes instead of four straight ones that all must be replaced when one bulb burns out.
- Changing to reusable bed pads from disposable ones. Labor costs of washing and folding reusable pads increased for the laundry department, while labor costs decreased for purchasing, logging, moving, storing, and disposing of 16,000 single-use pads yearly. Overall labor costs for the hospital did not change, but purchasing costs were reduced by \$5,000 annually.



Waste prevention efforts at the medical center resulted in annual reductions of more than five tons of waste. Not including savings from avoided disposal fees, these actions resulted in an estimated \$11,030 yearly cost savings for the small hospital. Through recycling and waste prevention, the hospital reduced its contracted trash hauling services by 60 percent. About a quarter of this reduction is attributed to waste prevention activities.

**CONTACT: WASTE EDUCATION CLEARINGHOUSE  
WASTE REDUCTION MANAGEMENT  
MINNESOTA OFFICE OF WASTE MANAGEMENT  
1350 ENERGY LANE  
ST. PAUL, MN 55108  
(612) 649-5482**



## **WASTE TYPES:**

Paper, ink, chemicals, and toner cartridges.

## **PROGRAM LOCATION:**

Grand Rapids, population 42,000, is located in north-central Minnesota and is known for its forests and scenic waterways. Major industries are timber and tourism. Markets can be over a hundred miles away.

## **PROGRAM SUMMARY:**

The Herald Review publishes a bi-weekly newspaper with a circulation of 8,000 and a weekly advertiser with a circulation of 20,000.

Staff members examined the Review's waste stream and brainstormed ideas to accomplish a reduction in the amount of waste the company disposed. Waste prevention ideas subsequently adopted include:

- Selling the endrolls of paper stock as package padding instead of throwing them out.
- Reducing paper, ink and labor waste caused by production overruns by accurately gauging the materials needed for each run.
- Reusing excess colored and black ink, which is collected in catch pans and added to the appropriate hoppers. When colored ink is contaminated, it is added to the black ink hopper.
- Saving and reusing chemicals needed in film developing; one gallon of developer now last three weeks instead of one.
- Reusing toner cartridges by having them rebuilt and refilled by a professional cartridge firm.

The Review's waste prevention measures are keeping 31 cubic yards and almost 13 tons of waste out of the community's landfill each year. Not including the savings from avoided disposal fees, waste prevention efforts have resulted in an estimated \$12,914 yearly cost savings for the business.

**CONTACT: WASTE EDUCATION CLEARINGHOUSE  
WASTE REDUCTION MANAGEMENT  
MINNESOTA OFFICE OF WASTE MANAGEMENT  
1350 ENERGY LANE  
ST. PAUL, MN 55108  
(612) 649-5482**



## **REDUCED VOLUME-BASED TRASH DISPOSAL FEES**

### **WASTE TYPE:**

Municipal solid waste.

### **PROGRAM LOCATION:**

Antigo, population 8,500, is in Langlade County in north central Wisconsin. Main industries are manufacturing and potato farming. The county has 285 lakes surrounded by woods; it is a popular fishing and recreational area.

### **PROGRAM SUMMARY:**

Approximately three years ago citizens of Antigo started to directly pay for trash disposal weekly. Previously waste disposal was paid for out of the general fund, so citizens were unaware of the individual or household cost of waste disposal. The city chose a pay-by-the-sticker system. Citizens purchase official stickers for \$1.50 each (\$1.00 in 1991) at a local gas station or grocery store. The stickers must be attached to each trash bag when it is set out or it will not be collected. Since the program was initiated the amount of trash set out for disposal has declined by roughly 50 percent.

A one-person truck collects the trash at each household once a week. Citizens have the flexibility of putting out zero, one, two or more bags each week, just as before, but now they see how much waste disposal costs. Popular alternatives to disposal are waste prevention and participating in the city's recycling and yard waste collection programs.

The revenues generated from sticker sales and tipping fees (about \$50/ton in 1991) pay for trash collection, recycling and yard waste programs, and landfilling. Currently, no tax dollars go toward any of these programs.

There has been no significant problem with illegal dumping. Illegal dumping occurred mainly when residents placed trash inside recycling bags. City officials were able to discourage this practice by finding names on envelopes in illegally-dumped materials. The names were turned over to police who then issued a littering citation.

**CONTACT: PAT VAN DER LEEST  
DIRECTOR OF PUBLIC WORKS  
700 EDISON STREET  
ANTIGO, WI 54409  
(715) 623-3633 EXT. 3  
FAX (715) 627-7099**



## **RETAIL WASTE PREVENTION**

### **WASTE TYPES:**

Packaging materials.

### **PROGRAM LOCATION:**

Sumner, Washington has a population of 50,000. Major industries are manufacturing and retail sales.

### **PROGRAM SUMMARY:**

Recreational Equipment Inc. (REI) is a Washington state based retailer with 37 outlets across the U.S. and they employ approximately 3700 people. The company has approached waste prevention at two levels: First, by working with vendors to eliminate unnecessary packaging at their distribution center, and second, by finding ways of reducing waste when shipping to retailers. REI has not tried to estimate cost savings or tonnage diverted through their efforts.

Part of a buyer's job at REI is to work with vendors/partners to reduce packaging and packing materials.

Waste prevention practices are listed below:

- Formerly tents came in individual boxes. REI buyers asked the distributor not to box the tents because they already come in stuff bags.
- To reduce the amount of plastic bags, where possible they ask distributors not to send garments in individual plastic bags, but instead to put many garments in one plastic bag.
- Each pair of Teva sandals used to come in a shoe box. Now REI only accepts Tevas that are rubberbanded together.
- To reduce the number of "hang tags" (tags that give information about a product), when feasible REI consolidates information on one tag.
- REI distribution centers request that retailers return shipping boxes on the next truck; newspaper is reused as packing material.

**CONTACT: JULIE DERUWE  
RECREATIONAL EQUIPMENT INC. (REI)  
P.O. BOX 1938  
SUMNER, WA 98390-0800  
(206) 395-3780**



## **CONCRETE ADDITIVES**

### **WASTE TYPES:**

Wood, cardboard, glass, plastic, newspapers, and phone books.

### **PROGRAM LOCATION:**

South Sioux City, Nebraska, population 9,776, is a rural community located on the Missouri River opposite Sioux City, Iowa. The city is surrounded by densely wooded bluffs overlooking the river to the east and rich agricultural lands in other directions. Manufacturing, food processing, and meat packing are the major employers in the area.

### **PROGRAM SUMMARY:**

South Sioux City has constructed the first Eco Path. The Eco Path is a 1000-ft-long, 6-ft -wide, and 4-in -thick bicycle trail containing over 50,000 lbs of local waste material. This material consists of wood, cardboard, glass, plastic, newspapers and phone books that were used instead of the traditional stone aggregate found in typical concrete. The waste is ground up and added to Portland cement, along with mineral binders, to form what is called Recrete. According to city administrators, Recrete can be poured or cast like ordinary concrete and has similar structural strength and appearance and they have not had any problems with cracking during the winter.

City Administrator Lance Hedquist spent approximately 80 hours coordinating with Papio Missouri Natural Resource District to build the trail. The program was not cost effective in the short run because the district had to purchase special grinders. However, expectations are that a large scale Eco Path could be very cost effective as landfill tipping fees rise. They need to charge \$50 a ton for the materials to be used in the Recrete and when landfill fees rise above that point it will be a cheaper alternative.

**CONTACT: LANCE HEDQUIST  
1615 1ST AVENUE  
SOUTH SIOUX CITY, NE 68776  
(402) 494-7517  
FAX (402) 494-7527**



## **"DROP & SWAP" - REUSE EVENT**

### **WASTE TYPE:**

Anything potentially reusable.

### **PROGRAM LOCATION:**

Wapakoneta is a small rural city in west-central Ohio. Its economy is based on small-scale manufacturing, (e.g., tool and dye companies, automotive suppliers, and agricultural processors). The surrounding agricultural region produces soybeans, corn, and wheat. Population in 1990 was 9,124.

### **PROGRAM SUMMARY:**

An annual salvage/reuse event called the "Drop and Swap" was initiated by the Scout Recycling Center, the Wapakoneta Waste Minimization Committee, and the Auglaize County's Solid Waste Advisory Committee. Residents are asked to bring unwanted items to the county fairgrounds to swap with their neighbors. In 1991 more than 400 items were exchanged; 1992 more than 600, and 1993 more than 900 items changed hands. Typical items exchanged include vacuum cleaners, lumber, furniture, lamps, bicycles, heaters, sinks, typewriters, and luggage. Remaining items were given to auction houses, thrift stores, and lawnmower and bicycle repair shops.

**CONTACT: BOB SABO  
AUGLAIZE COUNTY SCOUT RECYCLING CENTER  
922 ASTER DR.  
WAPAKONETA, OH 45895  
419/738-4788**



## **HOLIDAY/GREETING CARD REUSE**

### **WASTE TYPE:**

Greeting cards.

### **PROGRAM LOCATION:**

The program is located in Boulder City, Nevada. Materials come from all over the world.

### **PROGRAM SUMMARY:**

The Card Project at St. Judes Ranch for Children has recycled holiday, birthday, get well, and all other occasion cards for the past 20 years. St. Judes Ranch for Children is a non-profit, non-sectarian home for abused and homeless children. People across the United States and around the world send used cards to the ranch. The children trim the cards and paste them on to new backs. The cards are offered in packages of 10 for a suggested tax-deductible donation of \$6.50. The scraps are sent to the U.S. Gypsum plant in Southern California for recycling. Nothing from the project goes to the landfill. According to the card project coordinator Earlene Howery, about one and a half million cards were collected in 1992.

The primary purpose of the project is to teach the children about money and to instill in them a strong work ethic. The children earn 5 cents a card that passes quality control; another five cents is donated to their cottage fund. The children are taught money management and cottage funds are used to take them on day trips and excursions. Hopes are that the project will continue to grow and become a fundraiser for the ranch as well.

**CONTACT: ELEANORE ESSIG  
THE CARD PROJECT  
ST. JUDES RANCH FOR CHILDREN  
100 ST. JUDE STREET  
BOULDER CITY, NV 89005  
(702) 294-7100**



## **NURSERY REUSE**

### **WASTE TYPES:**

Empty pots, flats, tubs and barrels.

### **PROGRAM LOCATION:**

A small, but growing, historic gold mining community located in the Sierra Nevada foothills within commuting distance of Sacramento, Placerville has a population of 8,800. The town is located in El Dorado County, where major industries are agriculture, timber, and tourism.

### **PROGRAM SUMMARY:**

Front Yard Nursery asks their customers to return the pots in which plants are sold. The nursery will accept any empty pots, flats, tubs and barrels regardless of origin. The nursery has a sign posted in front advertising that they take pots. Customers receive a 5 to 25 cent credit towards other purchases. Many customers bring the containers back simply to avoid landfilling them, not because of the incentive. Estimates are that savings from reusing the pots amount to half of what would normally be spent purchasing new pots. A 50 cent reduction per bag of humus is given to customers who bring back bags from prior purchases and fill them themselves.

The nursery also keeps chickens on-site for natural pest control.

**CONTACT: KRISTIE LAMB  
FRONT YARD NURSERY  
5801 MOTHERLODE DR.  
PLACERVILLE, CA 95661  
(916) 626-3494**



### **III. RECYCLING AND COMPOSTING PROGRAMS**

#### **INTRODUCTION**

Recycling and composting are part of America's future. In this day of diminishing returns, recycling and composting will help conserve natural resources and energy supplies. They will create opportunities to establish new industries, increase employment, and reduce disposal costs.

Recycling and composting programs form the core of California's waste diversion efforts. However, many rural areas have had trouble implementing these programs because of collection distances, distance to markets, low levels of potential recyclables, and difficulties in funding these programs.

Recycling may be accomplished by using scrap to create the same type of product (old newspaper to newsprint), or a different product (newsprint to cellulose insulation). Recycling typically involves five steps: collection, separation (either before or after collection), processing, marketing, and use in manufacturing. The foundations of any recycling programs are the markets that exist for the materials that have been separated and collected. Expansion of collection programs and markets needs to be synchronized to ensure that the economics of recycling remain viable.

Composting, nature's way of recycling, is the biological decomposition of organic debris such as leaves, grass clippings, fruit and vegetable trimmings, and other organic material commonly found in municipal wastes. Compost refers to the stable humus or soil-like end product of decomposition.

Following are programs that have been successfully implemented in rural areas. Some of the programs are operated by private for-profit businesses, others are run by non-profit organizations. Many of the programs highlighted have been undertaken by organizations which are not in the recycling business. These companies, corporations, schools, and the like are starting and maintaining recycling and composting programs for both environmental reasons and because it makes good business sense.



## **BUSINESS RECYCLING**



## **MATERIALS RECOVERY FACILITY/ DISABLED CITIZENS WORK PROGRAM**

### **WASTE TYPES:**

Aluminum, glass, cardboard, paper, and scrap metal.

### **PROGRAM LOCATION:**

El Centro, Calif. is a city of 36,450 located in the Imperial Valley, adjacent to both Arizona and Mexico. Major industries are agriculture, government services, tourism, and retail sales to Mexico citizens.

### **PROGRAM SUMMARY:**

The Association of Retarded Citizens (ARC) established a non-profit recycling center staffed by retarded citizens in 1989 through a grant from the California Department of Conservation. The recycling facility accepts aluminum, glass, old corrugated cardboard, paper, and scrap metal. Customers are greeted and assisted by the client/employees as they bring in their recyclable goods. There are two full-time employees from ARC. At any one time the center is also staffed with at least three ARC client/employees who help customers separate and weigh materials, and one ARC client/employee who pays the customers for their recyclables. On days when newspaper and computer paper are collected the facility may be staffed by up to 20 ARC client/employees. The client/employees are paid based on their productivity, which gives them incentives to work hard and often.

In February, 1994 the facility recieved 34 tons of donated paper; three quarter ton of plastic; seven-and-a-half tons of glass; and one-and-a-half tons of aluminum. The collected recyclables are purchased by Alford's Distributing and marketed in Los Angeles. Customers enjoy visiting the recycling center and many have built friendly relationships with ARC client/employees. Other jurisdictions interested in acquiring similar labor should contact agencies like ARC to discuss their needs and opportunities.

**CONTACT: ARMIDA NORIEGA  
502 E. MAIN STREET  
P.O. BOX 1828  
EL CENTRO, CA 92244  
(619) 352-0180  
FAX (619) 352-3269**



## **SCHULLER INTERNATIONAL MANUFACTURING**

### **WASTE TYPE:**

Plastic wrapping, cheese, cardboard, pallets, and aluminum cans, curbside collect, scrap metals.

### **PROGRAM LOCATION:**

Willows, Calif., population 6,325, is located in the northeastern section of the Sacramento Valley. Its chief industry is agriculture and the most prevalent crop is rice. There is also a growing service sector for Interstate-5 travelers.

### **PROGRAM SUMMARY:**

Schuller International, makers of Manville Building Insulation products, has an extensive in-house recycling program. All waste generated in-house that can be recycled is separated and baled by the company. Including all plastic wrapping, cardboard, pallets, scrap metals, and aluminum cans.

Because Willows is a rice-growing community, there are large fields of standing water nearby that attract mosquitos. Schuller International, and the local Mosquito Abatement District have developed a unique program to address this problem. They divert all stormwater to a year-round pond where they raise mosquito-eating fish called Gambusia. The fish are fed on waste cheese from a local cheese manufacturing company (Rumiano Cheese Co.), which diverts 30 to 40 lbs. of waste cheese from landfills weekly.

**CONTACT: RON GREENBERG**  
**5916 COUNTY RD. #49**  
**WILLOWS, CA 95988**  
**(916) 934-6273**  
**FAX (916) 934-6287**



## **YAKIMA PRODUCTS MANUFACTURING**

### **WASTE TYPES:**

Colored and white paper, cardboard, metals, and polystyrene packaging.

### **PROGRAM LOCATION:**

Arcata, population 16,000, is located on the Northern California coast in Humboldt County. Humboldt State University with approximately 6,000 students, is situated within the city limits, and is the largest employer and waste generator in the area.

### **PROGRAM SUMMARY:**

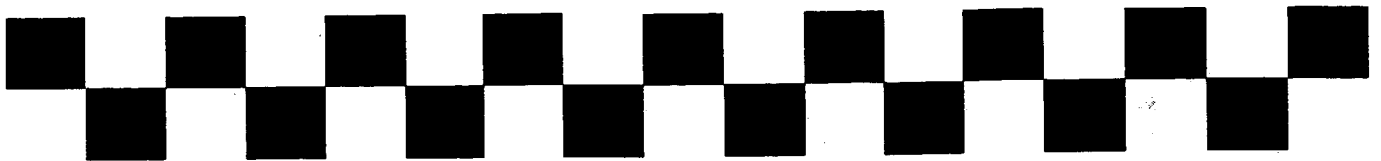
Yakima Products, a manufacturer of car racks, initiated a waste reduction program as part of both its manufacturing and administrative operations. Yakima made the commitment to not only divert recyclable materials, but also to purchase recycled products.

The company recycles all of its colored and white ledger paper. Receptacles for the paper are provided at each employees' desks. Larger collection containers are located near each printer and copier. Paper and all corrugated cardboard is then recycled at a nearby community recycling center.

Yakima also recycles various materials generated through its manufacturing process. Many components used in manufacturing are shipped in expanded polystyrene packaging. In addition, the production process generates steel tubing and extruded aluminum which is sold to a metals salvage company.

On the procurement side, Yakima purchases recycled paper for use in copiers and printers. Yakima prints its letterhead and catalogs, which number in the hundreds of thousands, on recycled and recyclable paper. Finally, recycled unbleached kraft corrugated cardboard (brown bag paper) is used for packaging its products.

**CONTACT: YAKIMA PRODUCTS  
NORB JAKABY  
PURCHASING MANAGER  
P.O. BOX 4899  
ARCATA, CA 95521  
(707) 826-8021  
FAX (707) 826-8029**



## **FAIR RECYCLING**

### **WASTE TYPES:**

Recycled paints, plastics, glass, paper, and manure.

### **PROGRAM LOCATION:**

The Shasta District Fairgrounds is located in Anderson, Calif., at the northern end of the Sacramento Valley. Almost half of Shasta County's population (161,000) is located in the City of Redding (70,000). Primary industries are lumber, manufacturing, recreation, and tourism.

### **PROGRAM SUMMARY:**

The Shasta County fairground is host to more than 215 events annually with an estimated 300,000 people attending. The fair's recycling program was three-fold this year. The fairground used recycled paints and, recycled plastics, and had a collection/composting program. Public information about the programs was extensive and proved to be a key element in their success.

Recycled latex paints were applied to the office building on the fairgrounds in 1993 and to horse stalls in 1990; the idea was to test the paint's durability in a heavy-use environment with an 80+ degree temperature variation. Total usage was 140 gallons, approximately 70 percent of the fairground's annual paint requirement. Fairground employees received many positive comments on the appearance of the paint and on the signs denoting the use of recycled paints.

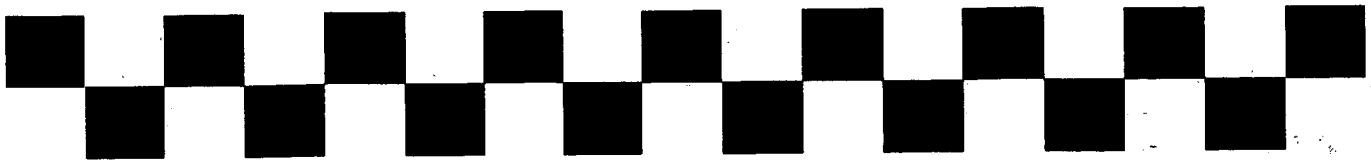
Recycled plastic lumber was also highlighted during the annual fair and is being used on a daily basis as benches, picnic tables, planters, and an information booth. Volunteers explained the contents and availability of the product and its benefits in keeping plastics out of the waste stream. More than 80,000 people were contacted in six days of operation. The success of the program can be attributed to the durability and uniqueness of the product. This project was the most costly of the three and was funded in whole by Crystal Dairy Products who felt a responsibility to provide information about reuse of plastic placed in the environment. The total project cost was \$3,575, including construction.

The Collection and Composting Program was a great success in keeping plastics, glass, paper, and animal manure out of the waste stream. A total of 23.64 tons (11.2 percent) of waste was diverted from the landfill during the fair. Key elements of the program were the assistance of City of Redding Waste Management Department and their coordinated efforts with the California Conservation Corps (CCC), who monitored the collection sites and provided information to fair patrons. The CCC also helped in the composting of the animal bedding/manure from the horse area. Fair staff are adding grass clippings and shredded prunings to the compost pile to keep it going.



Due to the support of City Waste Management located in Redding, and a grant there was no cost to the fair for the collection/composting program. Recycling efforts at the fair saved \$638.28 in disposal fees. A savings of more than \$1,900 was achieved by using the recycled latex. Fairgrounds Manager Mark Campbell reports that they were able to apply a superior product with excellent results in durability. The total diversion for the fairgrounds for the first year was estimated at 15 percent of all waste for the fairgrounds.

**CONTACT: MARK CAMPBELL  
SHASTA DISTRICT FAIRGROUNDS  
1890 BRIGGS ST.  
ANDERSON, CA 96007  
(916) 378-6789**



## **RESTAURANT RECYCLING**

### **WASTE TYPE:**

Glass, plastic, magazines, cardboard, newspapers, food waste, and aluminum and tin cans.

### **PROGRAM LOCATION:**

Grass Valley, population 9,475, is primarily a ranching and recreational community located an hour from Sacramento, Calif.

### **PROGRAM SUMMARY:**

The Apple Fare restaurant is a small business that has incorporated waste prevention and recycling into every aspect of its operation. Glass, plastic, magazines, newspapers, and aluminum and tin cans are recycled. Food waste, excluding meat and grease, is collected in 5-gallon buckets and given to a local nursery to compost. Cardboard boxes are either reused, returned to the supplier, or recycled. The restaurant switched from waxed paper milk cartons to recyclable plastic milk containers. The success of Apple Fare's program is evidenced by the replacement of their one-yard trash container (200-gallon) with a 90-gallon container, resulting in disposal fee savings of 50 to 75 percent.

**CONTACT: JOYCE ROLLINGS  
APPLE FARE RESTAURANT  
121 NEAL ST.  
GRASS VALLEY, CA 95945  
(916) 274-2555**



## **PRIVATE MATERIALS RECOVERY FACILITY**

### **WASTE TYPES:**

Aluminum, cardboard, newspaper, glass, #1 and #2 plastics, office paper, and tin cans.

### **PROGRAM LOCATION:**

Bismark, N.D., population 65,000, is located in the south central part of the state where the North Pacific Railway and U.S. 10 cross the Missouri River. Government, agriculture, retail trade, and the health industry are major employers in the region.

### **PROGRAM SUMMARY:**

In 1973, Anheiser Bush and McQuade-Dietrich Recycling Inc. initiated an aluminum collection program. By 1993 they had a Materials Recovery facility (MRF) processing over 5,000 tons of material from a 15-county region. The company operating the facility, McQuade-Dietrich Recycling is the largest employer of disabled citizens in the region. McQuade-Dietrich Recycling now collects 30 tons of recyclables a day, 20 days a month. Gary Deitrich contracts with town officials or community groups to pick up the collected recyclables, which must be cleaned and baled. McQuade-Dietrich Recycling only pays for the aluminum and all materials are brought to their facility to be marketed. McQuade-Dietrich Recycling delivers to most markets by railroad, as close as Minnesota and as far away as the West Coast, which allows the company to have a larger market. Most communities participating in this program use local disabled citizen organizations as staff for the sorting, cleaning, and baling of recyclables.

**CONTACT: UNITED WASTE SYSTEMS  
310 ENTERPRISE ST.  
BISMARK, ND 58501  
(701) 255-4496**



## **NEWSPRINT REMANUFACTURING**

### **WASTE TYPE:**

Newspaper.

### **PROGRAM LOCATION:**

Baker City, population 9,500 is located on the upper reaches of Oregon's Powder River, at the mouth of a shallow canyon. Woodworking and agriculture are the primary employers.

### **PROGRAM SUMMARY:**

Earth Partners, Inc. transforms 100 tons of newsprint each day, which saves 1,700 trees per day from being harvested for fiber. Postconsumer newsprint is shredded into fiber, blended with a polymeric resin, vacuum-formed into a mat, and pressed under heat and pressure into a hardboard panel.

A multitude of products, from flat panels to intricate moldings, may be produced using this process. It meets or exceeds the physical properties specified for the various applications while using a nonformaldehyde emitting resin. Earth Partners, Inc. has been in business since 1990; plans are to open several plants throughout the United States and abroad. Each plant will purchase newsprint at market prices from municipalities or collectors. The plants require an investment of \$20 million and employ 50 people on a 24-hour basis. Approximately 18 months is required to complete each plant.

**CONTACTS: RONALD PRATT AND JOHN CHEDESTER  
EARTH PARTNERS, INC.  
P.O. BOX 728  
BAKER CITY, OREGON 97814  
(503) 523-7450**



## **COW MATTRESSES**

### **WASTE TYPE:**

Tires.

### **PROGRAM LOCATION:**

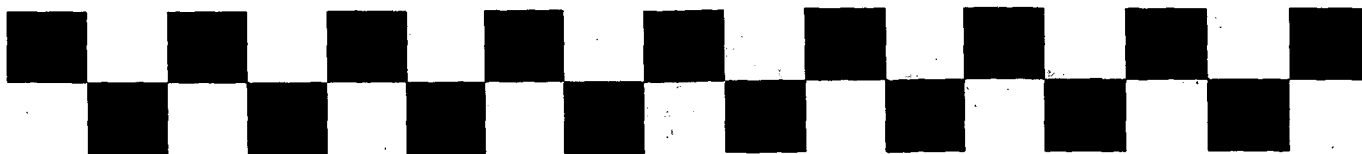
Wolsey, S.D., population 600, is an agricultural suburb 15 miles from Heron, and is surrounded by dairy and crop farms.

### **PROGRAM SUMMARY:**

This Diversion program was developed by a dairy farmer who uses mattresses stuffed with tire chips as bedding for his 200 cows. The cows are kept in stalls that have cold, hard, cement floors. The farmer Al Stegeman, orders mattresses from a tire re-capping company to place in the stalls. the mattresses are made of used tires put through a grinder (a magnet removes the steel belting) and wrapped into a woven polyester mattress. The mattress have a life span of at least five years. Because they are made of inorganic materials, bacterial growth is inhibited. The farmer reports the mattresses are very firm and the cows lie comfortably on them. Old newspaper is placed over the mattresses to absorb the cows bodily wastes (See next page).

**CONTACT: AL STEGEMAN  
ROUTE TWO, BOX 41  
WOLSEY, S.D. 57384  
(605) 883-4681**

**ALBERS DAIRY  
CHINO, CA  
(909) 597-5537**



## **ANIMAL NEWSPAPER BEDDING**

### **WASTE TYPE:**

Newspaper.

### **PROGRAM LOCATION:**

Wolsey, S.D., population 600, is an agricultural suburb 15 miles from Heron, and is surrounded by dairy and crop farms.

### **PROGRAM SUMMARY:**

Two tons of newspaper are reused every week by a dairy farmer to provide bedding for his 200 cows. Previously, the farmer used straw and it was necessary to operate a large fan in the cow stalls because of the high levels of dust created. The newspaper is much cleaner and drier than the straw and a fan is no longer needed. The paper also absorbs odor. In addition, the cows are cleaner and mastitis (inflammation of the udder) is reduced by as much as 70 percent.

The farmer picks up over-run and day old papers from the local newspaper. He uses his own small tub grinder to chop and shred the paper to make the bedding. The shredded paper is spread throughout the stalls; over time the paper biodegrades with the manure and is used as fertilizer. The farmer saves money by reusing the free newspapers instead of paying for the straw and sawdust, and his cows are healthier.

**CONTACT: AL STEGEMAN  
ROUTE TWO, BOX 41  
WOLSEY, S.D. 57384  
(605) 883-4681**



## **FOOD WASTE RECOVERY/HOG FEEDING**

### **WASTE TYPE:**

Food scraps.

### **PROGRAM LOCATION:**

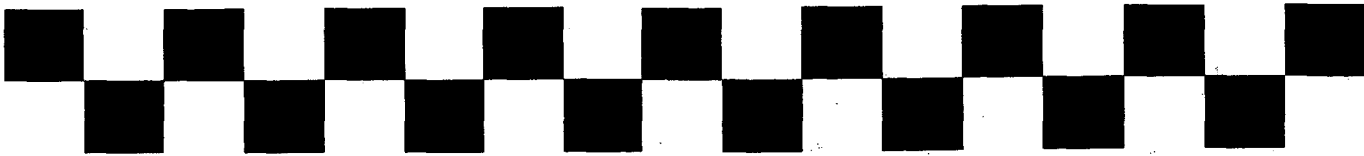
Peterborough, population 5,239, is located in southern New Hampshire in the Mount Monadnock region. Its primary industries are mail order companies and magazine publishing.

### **PROGRAM SUMMARY:**

Shaw Farms picks up all of the food scraps that Peterborough residents drop off at the town recycling center. According to the Town Administrator, nearly all residents using the recycling center also drop off food waste. There have been occasional fly problems at the dropoff centers but no reported odor problems.

Shaw Farms, which has been in business since the 1930s, raises swine exclusively on food scraps. Owner Glen Shaw picks up food scraps twice a week in the summer and once a week the rest of the year. All food waste is boiled with a steam boiler. While only 9.7 tons of food waste were recovered in 1989, 32.8 tons were recovered in 1990, an increase of nearly 240 percent. Food waste collection benefits the community as well as the local hog farmer, who says that it is too expensive to raise hogs on grain.

**CONTACT: GLENN SHAW  
SHAW FARMS  
BOX 427 MASON ROAD  
NEW IPSWICH, NH 03071  
(603) 878-1403**



# **INSTITUTIONAL RECYCLING**



## **SCHOOL RECYCLING: LAYTONVILLE, CALIFORNIA**

### **WASTE TYPES:**

Food waste, paper bags, aluminum cans, glass, milk cartons, and cardboard

### **PROGRAM LOCATION:**

Mendocino County, population 56,900, is a forested Northern California Coastal Community. Timber, fishing, agriculture and tourism provide the economic base.

### **PROGRAM SUMMARY:**

Through education, recycling, and vermicomposting, Laytonville elementary and middle school (420 students) have been able to reduce school trash by 60 to 80 percent! The program is a concerted effort by school administrators, teachers, staff, students, and parents. Last year 3600 lbs. of cafeteria food waste was composted using the vermicomposting system. A total of more than 7 tons of material was diverted over a 10 month period, saving approximately \$6,000 in disposal fees.

Laytonville has achieved this high diversion rate by putting worms to work in a process known as vermicomposting (composting with worms). The real key to the program's success has been the participation of the students. Students from the district's elementary and middle schools separate their lunch waste into non-protein "worm food" (i.e., no meat or dairy products), paper bags, aluminum cans, glass, milk cartons, cardboard, and trash.

Both the worm food and shredded wastepaper and paper bags are taken to the worm bins located in the school's garden. Under adult supervision, students monitor the bins and record the worms' activities. Students also built four 32-sq. ft. worm bins last spring.

The district, assisted by the Aseptic Packaging Council, established a program for recycling milk cartons. The milk cartons are rinsed by students using leftover dishwater. They are then bagged and stored until a parent volunteer delivers them to a dropoff center. The remaining recyclables are delivered to a local recycling center. The recycling center pays the school for California redemption value containers.

The school places all dairy and meat waste in containers to be picked up on a first-come-first served manner. The scraps are picked up by area residents to be used as hog feed. Almost five tons of food scraps are diverted through this program annually.



As part of the students' classroom instruction, Binet Payne has developed lesson plans centered on the vermicomposting project. Several classrooms are involved in collecting recyclables and preparing them for recycling. For example, one class is responsible for collecting and breaking down cardboard boxes, while another collects and crushes aluminum cans. In addition, each month students are recognized for their waste prevention and recycling efforts at a school assembly.

**CONTACT: BINET PAYNE  
150 RAMSEY RD.  
LAYTONVILLE, CA 95454  
(707) 984-6123, EXT. 36**



## **SCHOOL RECYCLING & WASTE PREVENTION: PLACERVILLE, CALIFORNIA**

### **WASTE TYPES:**

Cardboard, paper, glass, HDPE, PET, drink containers, milk cartons, and aluminum trays.

### **PROGRAM LOCATION:**

A small, but growing historic gold mining community located in the Sierra Nevada foothills within commuting distance of Sacramento. Placerville population 8,800, is in El Dorado County which is primarily dependent upon agriculture, timber and tourism.

### **PROGRAM DESCRIPTION:**


Custodians initiated a waste prevention, recycling and composting program at Sierra Elementary School. The program has reduced trash by more than 50 percent! The school has been able to decrease its trash generation from 3 cu yds to 1.5 cu yds daily. The school district redirects the savings to the school's waste management program.

Sierra Elementary School (K-6) has approximately 550-600 students and 45 staff members. The school recycles cardboard, milk cartons, paper, glass, HDPE and PET plastic drink containers, and aluminum trays. The cardboard is collected by El Dorado Disposal, which provides, at no cost, a 2-yd dumpster for storing the cardboard. The paper is sorted by the custodial staff and collected by the county recycling program. The remaining materials are collected by Curbside Express, which provides "blue bins" and free pickup service.

Using disposal savings the school purchased a chipper/shredder to convert tree and yard waste to ground mulch. This will further reduce costs because the organic materials will not go into the dumpster and, the district will not have to purchase mulch for the school grounds. For a complete cost analysis of the chipper/shredder, call the CIWMB for a copy of *Seeing Green Through Waste Prevention*.

The custodians also found a use for old bus tires. A local apple farmer reuses the tires on his farm equipment and trucks. The farmer in turn donates Christmas trees to community members who cannot afford them.

Sierra's custodians actively involve the students and staff. The "Golden Apple Core Award" is bestowed on the outstanding class of waste reducers each month. Each student in the winning class also receives a piece of Jolly Rancher candy.



Students organized an Earth Savers club. The club is responsible for monitoring cafeteria recycling, collecting recyclables, motivating students and staff, and identifying innovative solutions to deal with Sierra's waste. For example, while Earth Savers were monitoring cafeteria recycling, they noticed unused, unopened food (e.g., fruit, and chips) are being thrown away. The solution was to intercept the food before it hit the trash can. Some food is washed and distributed the next day during lunch to those who do not bring lunch or are still hungry. Most of the food is donated to a local food kitchen.

Food that cannot be reused is fed to worms. The custodians built a large compost bin, made from used wood, and inoculated the compost pile with red worms, which thrive on food waste. The worms were purchased with aluminum can recycling funds. The bin is located behind a storage room. The custodians are responsible for monitoring the compost and ensuring the worms do not go hungry. Because of the large volume of food waste however, not all of the food is diverted in this manner.

Sierra students are preparing to begin milk carton and drink boxes recycling. They put their cartons in a separate container, pouring the unused liquid in a bucket so it doesn't spoil in the dumpster. Some of the cartons are used in classroom projects.

To keep everyone motivated and up-to-date on the recycling program, the custodians have developed a monthly newsletter called the Refuse News. The newsletter demonstrates to the students and staff the progress being made in programs and keeps them informed.

**CONTACTS: TANYA BOOLOOTIAN/JACK BRABROOK  
1100 THOMPSON WAY  
PLACERVILLE, CA 95667  
(916) 622-0814**



## **SCHOOL RECYCLING: KNEELAND, CALIFORNIA**

### **WASTE TYPES:**

Mixed paper, cardboard, plastic, aluminum, glass and newspapers.

### **PROGRAM LOCATION:**

Humboldt County, population 66,800 is a heavily forested Northern California coastal county. Roughly 250 miles north of San Francisco, much of the population is clustered along major transportation routes. Logging, agriculture and tourism provide the economic base for the County.

### **PROGRAM SUMMARY:**

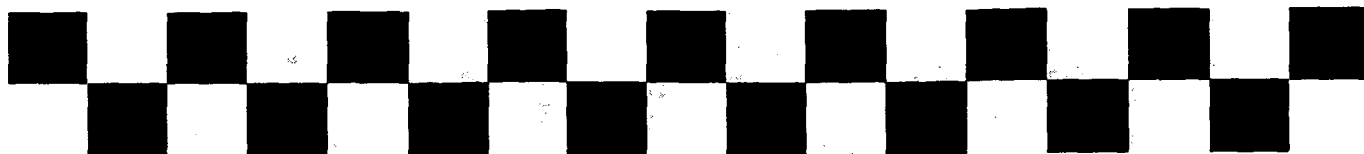
Kneeland is a one-school district, with 56 students in two classrooms, and a staff of seven. The local franchise trash hauler, City Garbage of Eureka, stops service a quarter mile from the school. Before stricter air quality laws were passed, the school burned all of its trash, except aluminum cans.

Recently, Kneeland received grant funds from Humboldt County to build a shed to house recycled materials collected from the school and community. The shed, built by the California Conservation Corps, took 240 hours of construction time. Twice monthly, the school holds a collection event for the community; materials are collected for recycling by the local 4H club. Materials collected include: mixed paper, cardboard, plastic bottles, aluminum cans, glass bottles, and newspapers. An estimated 90 percent of the school's waste is paper. Magazines, particularly unsolicited catalogs, are the biggest waste type. Also, because it is a one-school district Kneeland receives multiple copies of district mailings. Of the material recycled, an estimated 60 percent is paper; the remainder is glass and bottles. The district diverts almost a half ton a month.

The school does not have a cafeteria, and lunch waste is not a problem. Most students that use disposables, such as lunch bags and plastic sandwich bags, take them home for reuse.

City Garbage of Eureka loans six 90-gallon waste wheelers to the recycling program, but does not collect recyclables or waste from the school site.

The California Department of Forestry (CDF) has a helitrack base a half a mile from the school, which has a summer crew of approximately 30 people. CDF uses the program at Kneeland for all but their wet trash. The portion of the combined trash that is not recycled is taken home by a school staff member for city collection. This amounts to approximately one 30-gallon can each month.



The district is currently investigating the use of worm boxes to divert wet trash. This is also being coordinated with CDF. In addition, the district is considering the possibility of shredding paper for use by local cottage industries as a packing material.

**CONTACT: JAMES MALLOY  
9313 KNEELAND RD.  
KNEELAND, CA 95549  
(707) 442-5472**



## **SCHOOL RECYCLING: MONTAGUE, CALIFORNIA**

### **WASTE TYPES:**

Aluminum cans, newspaper, mixed office paper, and PET containers.

### **PROGRAM LOCATION:**

Siskiyou County, population 24,050, shares a border with Oregon. Siskiyou has a significant amount of publicly owned land and their economy is dependent on timber, tourism and agriculture (mostly cattle and hay).

### **PROGRAM SUMMARY:**

The school district in Montague, Calif., is comprised of one K-8 school (Willow Creek Elementary) with 34 students. The school began collecting aluminum cans in October of 1992, both to conserve resources and as a fundraiser. In the Spring of 1993, the school was approached by the California Conservation Corps (CCC) to expand the program to include newspaper, mixed office paper, and plastic bottles (PET).

Currently, the CCC collects materials from the school and transports them to a recycling center. The school receives approximately \$15/month from the sale of aluminum cans, which totaled 87 lbs in 1993. No revenue is generated from the other recycled materials.

The CCC assisted in setting up the program, including providing metal recycling bins and giving an hour-and-a-half long presentation on why recycling is important. School staff followed this assembly with another hour-long period used to inform students on the specifics of the program.

**CONTACT: DWIGHT JONES  
5321 YORK ROAD  
MONTAGUE, CA 96064  
(916) 459-1537**



## **SCHOOL RECYCLING: ETNA, CALIFORNIA**

### **WASTE TYPES:**

Mixed paper, plastic soda bottles, aluminum cans, and glass.

### **PROGRAM LOCATION:**

Siskiyou County, population 24,050, shares a border with Oregon. Siskiyou has a significant amount of publicly owned land and their economy is dependent on timber, tourism and agriculture (mostly cattle and hay).

### **PROGRAM SUMMARY:**

This program established at Etna Elementary (400 students) saves money, both in avoided trash disposal costs and in reduced need for purchases (e.g., paper printed on one side is used again in classrooms).

Currently Etna Elementary collects mixed paper, plastic soda bottles, aluminum, and glass. There is a large cyclone fence bin in the parking lot for the community to use. The U.S. Forest Service picks up and transports the paper at no cost. Other materials are driven by parents and volunteers 24 miles to Yreka. Revenue from aluminum cans goes into the general fund; no other materials bring in revenue at this time. They have diverted 87 tons of aluminum cans. Food waste is given to farmers for animal feed. Key organizers are Jerry Silva, a 4th grade teacher; Marla Knight of the Forest Service; and Gary Warner from the schools' outdoor sites program.

Organizers report that the program took very little time to set up. Currently Phase II is being planned. This will encourage greater community involvement; a central location will be established for collection of recyclables from the community.

**CONTACT: RAY CAMERON  
P.O. BOX 490  
ETNA, CALIF. 96027  
(916) 467-3320**



## **SCHOOL RECYCLING: PENN VALLEY, CALIFORNIA**

### **WASTE TYPES:**

Paper and cardboard.

### **PROGRAM LOCATION:**

Penn Valley is located in Nevada County which has a population of 73,100. They are approximately 17 miles west of Grass Valley in a ranching and recreational foothill community located an hour from Sacramento, Calif.

### **PROGRAM SUMMARY:**

Pleasant Valley School District operates two schools in an area with a population of about 10,000. This small school district recycles all types of paper and cardboard. The program was initiated by custodians and teachers more than three years ago.

There are recycling boxes in the classroom. When the box is full, the teachers write a maintenance request for pickup. When there are 10 or more boxes, Grass Valley Disposal picks up the paper for free. Grass Valley Disposal also provides a weekly pickup for the district's cardboard.

The district composts its grass clippings at each site. The district estimates that 25 to 50 percent of the district's waste is diverted through this program and only two percent of the custodians time is spent on the program.

**CONTACT: DENNIS HILSABECK  
14685 PLEASANT VALLEY RD.  
PENN VALLEY, CA 95946-9529  
(916) 432-7337**



## **SCHOOL RECYCLING: MARKLEEVILLE, CALIFORNIA**

### **WASTE TYPES:**

Aluminum cans.

### **PROGRAM LOCATION:**

Alpine County, population 1,113, consists of several small rural communities tucked into the Sierra Nevada mountains. Publicly-held forest lands comprise 95 percent of the county, making it a very popular recreational area and providing its economic base.

### **PROGRAM DESCRIPTION:**

In 1992 a Special Education teacher wanted to instill in her students an appreciation for the environment and decided that recycling aluminum cans would be an excellent way of doing this. First she had her students paint trash cans to identify them as recycling containers. Then she placed the containers throughout the school and at nearby campgrounds. The U.S. Forest Service helped by installing can crushers at the campgrounds. The teacher makes regular pickups of the recyclables and has her students sort them. She volunteers this service, which takes about 10 hours a week.

Key players in this program were all part of a recycling committee that was a subcommittee of the county Local Task Force established as a result of AB 939. Subcommittee members represented local government, waste haulers, the public, the Forest Service and schools.

One hundred and fifty lbs of aluminum were diverted over a season; transportation costs absorbed all revenues.

**CONTACT: CHERYL SPARKS  
ALPINE COUNTY  
PO BOX 387  
MARKLEEVILLE, CA 96120  
(916) 694-2287  
FAX (916) 694-2491**



## **SCHOOL RECYCLING: SAN ANDREAS, CALIFORNIA**

### **WASTE TYPES:**

Aluminum, cardboard, glass, paper, plastic, chipboard, newspaper, and tin.

### **PROGRAM LOCATION:**

Calaveras County, population 33,900, is a foothill community with the eastern portion of the county reaching the 8,000 foot level in the Sierra's. Tourism, agriculture, ranching and timber provide the economic basis for the county.

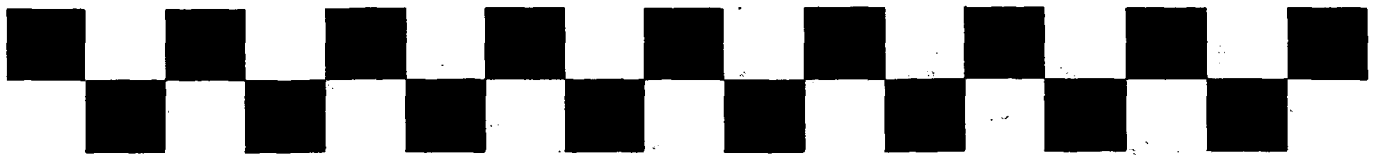
### **PROGRAM SUMMARY:**

Gold Strike High School, an alternative high school consisting of about 80 students, operates a full-service recycling center. This innovative program, called Project B.R.I.T.E (Bring Recycling Into Today's Education) is an integrated district-wide recycling, purchasing, and solid waste management education program.

Initiated by Principal Kristi Rodehurst and Doug Goldie a teacher at the high school, Project B.R.I.T.E. was designed to provide meaningful work experiences and to promote environmental appreciation for "youth-at-risk" students. The project received unanimous support from the school board as well as support from teachers, waste haulers and students.

The project began with a shed constructed on the school grounds to serve as recycling center. A surplus van was donated and refurbished to collect recyclables from other schools. The program has been successfully operating and diverting materials since 1991. From August 30, 1991 to June 2, 1992 almost 44 tons of material was diverted.

The recycling center is staffed mainly by students in Doug Goldie's Project B.R.I.T.E. class, called Earth Corps volunteers. By participating in this project, students are taught recycling theories, fundamentals of solid waste management, career possibilities, public speaking skills, and job skills. Several students have found employment in the recycling industry as a result of this training. Along with collecting and sorting recyclables, Earth Corps volunteers also make presentations on recycling at every elementary school in the area. An estimated, 3,000 elementary students in Calaveras County and surrounding counties have learned about Project B.R.I.T.E. and recycling from Earth Corps volunteers.



Doug Goldie is a full-time teacher at Gold Strike High School and a mentor teacher for the district. He obtained a grant from the State Department of Education for 10 release days (free days to develop the program) to coordinate the Earth Corps elementary school presentations. He estimates that the time commitment to this program is approximately 20 hours/week.

The school district has also saved money through Project B.R.I.T.E.. By diverting recyclables from the solid waste stream, the district will have saved approximately \$8,000 a year in solid waste disposal costs.

**CONTACT: DOUG GOLDIE,  
PROJECT B.R.I.T.E.  
PO BOX 178  
SAN ANDREAS, CA 95249  
(209) 754-5105**



## **PRISON RECYCLING**

### **WASTE TYPES:**

Paper, cardboard, mattresses, wood, metals, textiles, and milk cartons.

### **PROGRAM LOCATION:**

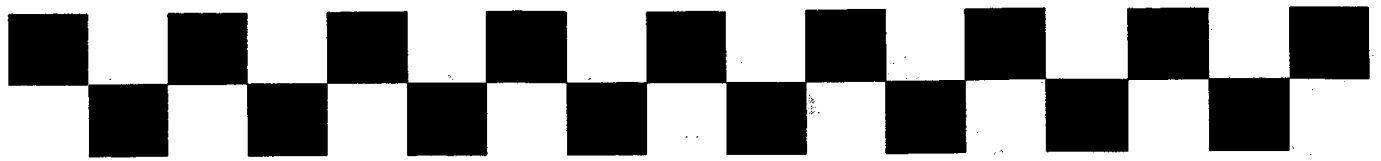
lone, population 7,150, is located in the Sierra foothills of Amador County in California. Amador is a popular tourist area; local industries include wineries, lumber mills, rock and aggregate mining, and a pencil manufacturer.

### **PROGRAM SUMMARY:**

Mule Creek State Prison (MCSP) has a population of 3,750 inmates and 940 staff members. The prison is a 24-hour facility that generates paper, cardboard, mattresses, and scrap metal as wastes. The Department of Corrections has developed a Recycling and Salvage Program (RASP) in each prison and conservation camp throughout California. Mule Creek has done an excellent job in carrying out their RASP program under the direction of Sgt. Gary Williams and with the support of administration and staff.

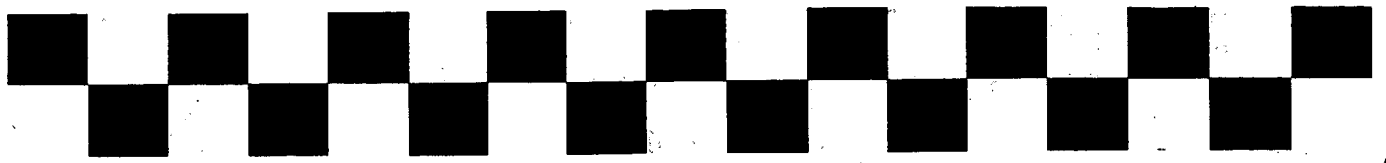
With limited resources - for example, there is no building or covered storage area - the RASP program has developed into a model for institutions throughout California. Materials recycled from the waste stream include wood, metals, mattresses, textiles, and milk cartons. The prison also collects the recyclable material from the Preston School of Industry and the Department of Forestry Training Academy located near the prison. Since RASP's inception in 1991 by Sgt. Williams, more than 1,000 tons of material have been recycled or salvaged. An estimated \$800 to \$2,200 worth of clothing is recovered weekly through the program and put back into the system. In addition, \$1,500 a month has been saved in trash hauling fees. Approximately 55 percent of the waste stream has been diverted yearly since 1991.

Sgt. Williams has developed a nine-page Recycling Handbook and holds monthly recycling committee meetings and training sessions. In addition, MCSP has a bicycle refurbish/reuse program. The bicycles are donated by the community, refurbished and distributed to indigent children through the local school district.



Sgt. Williams has a crew of 10 level-I inmates (very low-level risk inmates), who collect paper and old corrugated cardboard from 15 3-cu-yd bins each day, along with various other recyclables. Within the prison grounds, level-III (medium risk) inmates are assigned to each building; recyclables collected are taken to a central location for pickup by Sgt. Williams and his crew, who take them to another location where they are separated by level-I inmates. The markets for the materials change periodically, dependent on the price MCSP receives for the material. The paper and cardboard are either picked up by the recycler or taken by Sgt. Williams to Sacramento. Most of the recyclables are taken to either Sacramento or Stockton. MCSP does its own hauling to the landfill and has reduced the number of dropoffs from three times a day to twice a day.

**CONTACT: SGT. JEFF BAKER/RASP PROGRAM  
4001 HIGHWAY 104  
IONE, CA 95640  
(209) 274-4911 EXT. 7105**



# **COMMUNITY RECYCLING**



## **COMMUNITY RECYCLING: MOLOKAI, HAWAII**

### **WASTE TYPES:**

Glass, newspaper, white paper, magazines, cardboard, tin cans, plastic and aluminum.

### **PROGRAM LOCATION:**

Molokai, population 6,717, is located on the Hawaiian Island Molokai and is part of the County of Maui. Tourism and agriculture provide the primary employment base.

### **PROGRAM SUMMARY:**

An environmental group called Molokai C.A.R.E.S. (Conservation And Recycling Ensures Survival) initiated a recycling program on the island in 1990. They received a \$77,000 grant from the county for the first year of the program's operation. These funds were used to purchase a green waste chipper and to develop a centrally-located recycling center. Once the program had gained the public acceptance and enthusiasm necessary to survive over time, the environmental group let volunteers and community service groups staff and operate the facility.

On the first Saturday of each month, community groups are invited to help in a Community Work Day. They bale or chip all the recyclables collected, including glass, paper, cardboard, and aluminum. The paper is sent to local farmers to be used for mulch. A local company purchases the aluminum and ships it to Oahu to be processed. The revenue generated is either reinvested in the program or is donated to the volunteer group that helps with the baling and sorting. In the first year of program operation the island of Molokai was able to reduce the waste disposed of at landfills by 25 percent. The State of Hawaii requires a 25 percent reduction in the amount of waste landfilled by 1995 and 50 percent by 2000.

**CONTACT: HANA STEEL  
DEPARTMENT OF PUBLIC WORKS  
200 SOUTH HIGH ST.  
WAILUKU, MAUI, HAWAII 96793  
(808) 243-7875**



## **COMMUNITY RECYCLING: IMPERIAL, NEBRASKA**

### **WASTE TYPES:**

Aluminum, newspaper, magazines, junk mail, glass, tin cans, film plastics, #1 and #2 plastics, cardboard, paperboard, non-ferrous metals, styrofoam, white, colored, slick and computer paper, oil, oil filters, tires and auto batteries.

### **PROGRAM LOCATION:**

Imperial County, population 6,000, is a farming community (wheat, corn) in southwestern Nebraska close to both the Colorado and Kansas borders.

### **PROGRAM SUMMARY:**

Jeramiah Wickham runs a non-profit, unsubsidized recycling business called Reclaimed Resources. He volunteers his time and truck to collect recyclables in rural towns in Nebraska, Colorado and Kansas. If a town wants to be a part of Reclaimed Resource's program, they must meet the following four requirements: 1) a place must be provided for storage of the recyclables; 2) all recyclables must be sorted and processed by the community and the community must collect aluminum as part of its program; 3) machinery must be provided to assist in loading the collected items; and 4) a \$200 startup fee. Reclaimed Resources has a portable baler for loan to communities and is considering purchasing a chopper for shredding used tires. The startup fee is used to purchase plastic 55-gallon barrels for the regular collection service.

A town of about 1,000 people needs only one person to staff a site one half hour per day, and four people for about two hours each month to help load the trailer. Reclaimed Resources pays the community for collected items, but it requests that all the revenue generated from the program be used to improve the community in some way. Last year Reclaimed Resources collected and recycled 2,000 tons from 40 communities in the three states.

**CONTACT: JERAMIAH WICKHAM  
RECLAIMED RESOURCES  
BOX 184  
IMPERIAL, NEBRASKA. 69033  
(308) 882-3934**



## **DROPOFF FACILITY**

### **WASTE TYPES:**

Glass, steel cans, aluminum, plastics, paper, cardboard, and used oil.

### **PROGRAM LOCATION:**

Imperial County, population 6,000, is a farming community (wheat, corn) in southwestern Nebraska close to both the Colorado and Kansas borders.

### **PROGRAM SUMMARY:**

Imperial began a dropoff recycling facility by renting buildings as dropoff sites and through time they managed to purchase an old school building. A baler and plastic chipper were purchased with state grant funds from a \$1.00 tax on each new tire purchased in the state. The building is centrally located and the facility accepts glass, steel cans, aluminum, plastics, paper, and cardboard, but makes no payments for the recyclables. Two full-time employees staff the facility and do sorting and baling. When sorting and baling are completed, they call the hauler who collects and pays for the items. Last year, 320 tons of material was diverted.

**CONTACT: JO LEYLAND  
P.O. BOX 637  
IMPERIAL, NEB. 69033  
(308) 882-4368**



## **TOWN RECYCLING CENTER**

### **WASTE TYPES:**

Glass, plastics, textiles, aluminum and ferrous cans, mixed paper, and food wastes.

### **PROGRAM LOCATION:**

Peterborough, population 5,239, is a small rural town in the Monadnock region of southern New Hampshire. Its primary industries are mail order companies and magazine publishing.

### **PROGRAM SUMMARY:**

The Town of Peterborough has never offered municipal trash collection. The town recycling center, located at the town landfill, was first established in the late 1970s as a voluntary recycling dropoff program. Source separation of recyclables at the landfill was mandated in 1980. This required all residents and businesses using the site to separate materials into recyclable and nonrecyclable components. The recycling center is a simple, horseshoe-shaped facility. Before individuals can dump their trash, they must pass through a carefully-plotted rout; they can deposit color-separated glass at the first stop; plastics, textiles, aluminum and ferrous cans, and mixed paper into separate containers at the second; and food wastes at the third. At the last stop, residents may discard nonrecyclable trash. In 1992, 935 tons were recycled and \$9,420 was saved in landfill disposal costs.

Open four days a week, from 8 a.m. to 6 p.m., the recycling center employs three full-time employees to prepare materials for marketing. Materials are processed using a home-built conveyor and a magnetic roll drum to separate metal cans. Paper and PET is baled and HDPE is shredded. Bulky items, such as lumber, windows and wire, are set aside in a reuse area and given away to residents. Other reusable items, such as small household goods and books, are displayed and sold to residents. The recycling center has gained the reputation as a thrift store where people look for hard-to-find items.

Peterborough uses a variety of markets, nearly all of them out of state, and some are out of the country. One exception is Shaw Farms see page III-14.



Approximately 64 percent of Peterborough's residents use the town recycling center. Of the materials deposited at the center, 95 percent are generated by residents and approximately 5 percent are from commercial sources. Deposits of recyclable and nonrecyclable materials is free; however, users must obtain an annual permit (The first permit is received free of charge; subsequent permits cost \$1 each.).

**CONTACT: ED CHASE  
PUBLIC WORKS DIRECTOR  
1 GROVE STREET  
PETERBOROUGH, NH 03458  
(603) 924-8000  
FAX (603) 924-8001**



## **ONE-STOP DROPOFF & PROCESSING OF RECYCLABLES**

### **WASTE TYPES:**

Glass, aluminum, bi-metal cans, cardboard, magazines, junk mail, newspaper, polystyrene, wet and dry cell batteries, computer paper, and plastic.

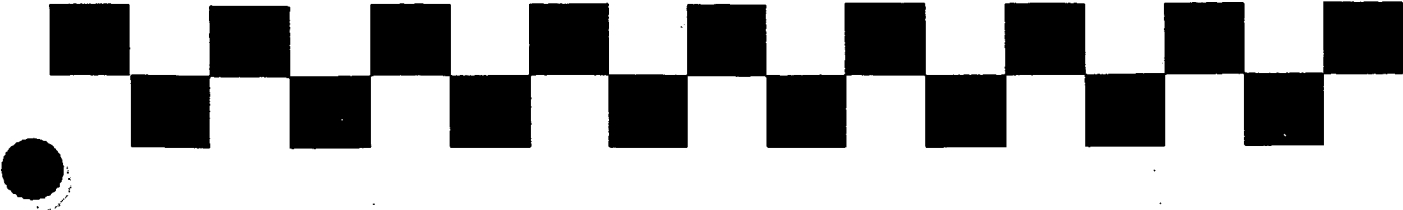
### **PROGRAM LOCATION:**

Wapakoneta, population 9,214, is located in west-central Ohio in an agricultural region that produces soybeans, corn, and wheat. Its economy is based on small-scale manufacturing (e.g., tool and dye companies, automotive suppliers, and agricultural processors).

### **PROGRAM SUMMARY:**

Most of the materials collected at Wapakoneta's Recycling Center are delivered by residents and commercial businesses. A few residents from adjacent rural areas, outside the city limits, also bring materials to the center. Materials are processed at the dropoff center, using only a plastic baler, a can crusher, and a glass crusher.

Processing equipment was purchased in 1990; before that time, materials were marketed without mechanized processing. Most materials are processed Saturday, when the dropoff center is staffed with at least 30 volunteers in addition to the five full-time city employees. Workers separate plastics by resin type and bale each type separately. Glass is manually separated by color. The center receives about 80 percent clear glass and 10 percent each of green and brown glass. Clear glass is immediately crushed with the glass crusher. Brown and green glass are stored separately and crushed when a sufficient quantity has been collected. Labels are removed from tin cans before crushing. Aluminum cans mixed with some bimetal cans are put in boxes. Typically, about 25 percent of boxed cans are bimetal. Corrugated cardboard is loaded directly onto a packer truck. Currently they are averaging 28 tons/week.



Newspaper and HDPE plastic containers are used locally to produce new products. Newspaper is sold to USF Insulation, a local manufacturer of insulation that sells its product primarily to lumber yards. Baled HDPE is sold to United Recovery in Findlay, Ohio. United Recovery manufactures plastic pipe from this material and resells any remaining HDPE. Glass, aluminum, scrap metal, and computer paper are sold to Ohio Recycling, a recycling broker. Tin cans are marketed with adjacent Mercer County's tin cans to a de-tinner. Corrugated cardboard collected is sold with the cardboard collected through the city's collection program, to Allen County Recycling in Lima, Ohio. Baled PET is sold to a broker, Minster Plastics, in Minster, Ohio. PET plastic containers are resold to a firm in Cleveland, Ohio for manufacturing into plastic lumber. Polystyrene packaging is given to Mercer County, which resells it. In 1991, it was sold to a company in Indiana for manufacturing into new egg cartons. Less than 1 percent of the total tonnage brought into the center is nonmarketable and discarded.

**CONTACT: BOB SABO  
AUGLAIZE COUNTY SCOUT RECYCLING CENTER  
922 ASTER DR.  
WAPAKONETA, OH 45895  
(419) 738-4788**



## **REGIONAL RECYCLING PROGRAM**

### **WASTE TYPES:**

Glass, cardboard, #1 and #2 plastic, tin cans, and aluminum.

### **PROGRAM LOCATION:**

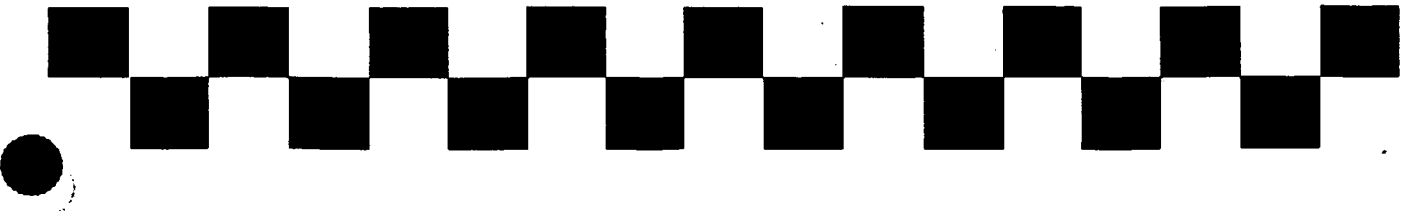
Neligh, Neb., population 1,700, is primarily an agricultural community located in Antelope County; a large marking flag manufacturer is also part of the economic base.

### **PROGRAM SUMMARY:**

In January 1991, Bev Clark attended a Nebraska Community Improvement Program meeting. At the meeting she volunteered to start collecting recyclables for Neligh and the surrounding rural communities.

Two years later she is a county employee serving 11 communities within a 72-mile radius. Antelope County leases 20 semi-trailers; each community in the program provides a location to place a trailer. The trailers contain individual barrels for separation of the recyclables. Each community is charged \$115 a month to rent the trailers, and required to staff its own trailer with either volunteers or city employees. When the trailer is full of clean and sorted recyclables it is replaced with an empty one. When the full trailers arrive in Neligh they are weighed and the numbers are recorded. The materials are hauled to markets about 100 miles away. The City of Neligh operates Antelope County Recycling, which receives the revenue from the recyclables. The county received a \$295,000 grant from the state to buy 2 balers and a glass crusher.

**CONTACT: BEV CLARK  
RURAL ROUTE 2  
BOX 65  
NELIGH, NEBRASKA. 68756  
(402) 887-4944**



Carder, Inc., a highway construction business with trucks, trailers, and hydraulic cranes that could be used for collection, was chosen to collect the material. Collection takes at least two days four times a month. Approximately 240 miles are covered in one day and 350 miles the next. In the first 18 months the program collected 2,979 tons. Contaminants were kept at a low level because the dropoff bins were designed with small holes shaped as the desired material, keeping trash out. Organizers attribute the success of the program to the ease of collection, 24-hour dropoff bins, and the design of the bins that discourages trash dumping.

**CONTACT: RAY LARIVIERE  
PROWERS COUNTY DEVELOPMENT, INC.  
LAMAR, COLORADO, 81052  
(719) 336-2384**



## **NON-PROFIT REGIONAL RECYCLING CENTER**

### **WASTE TYPES:**

Cardboard, newspaper, white paper, tin, glass, and aluminum.

### **PROGRAM LOCATION:**

Holdrege, population 5,000 is surrounded by low hills and borders the Platte Valley. The economy is manufacturing based.

### **PROGRAM SUMMARY:**

Bill Robinson's regional recycling center serves an approximately 70-mile radius. Each community that uses the facility must collect, clean, and separate their recyclables, before delivering them to the facility. The towns do not receive any reimbursements.

Nebraska requires a 25 percent reduction in the amount of waste disposed by 1995. Consequently, there is an awareness of the need for waste diversion and extensive advertising by the recycling center and state is taking place in the region. Mr. Robinson's facility collects about 50 tons of recyclables a week, including 20 tons of newspaper. The paper is shredded and sold to local farmers for animal bedding. He also collects cardboard, tin, glass, and aluminum.

Mr. Robinson reports that marketing the processed material has not been a problem because he produces a consistently clean, high-quality product. He does not pay for recyclables brought to his facility and the revenue from material sales covers only a small portion of facility overhead. The remainder of the operational costs are covered by the state for the rehabilitative services provided to developmentally-disabled people who work at the center. He employs eight full-time employees.

**CONTACT: BILL ROBINSON  
302 WEST AVE.  
HOLDREGE, NEBRASKA. 68949  
(308) 995-4087**



## **REGIONAL RECYCLING & COOPERATIVE MARKETING**

### **WASTE TYPES:**

Used oil, antifreeze, glass, aluminum, tin, magazines, newspaper, cardboard, and mixed, computer and white paper.

### **PROGRAM LOCATION:**

The area includes four counties, population 113,000, covering 1,230 square miles adjacent to the Chesapeake Bay in Maryland. Fishing, seasonal tourism, and farming (tomatoes, corn, wheat) provide the economic base.

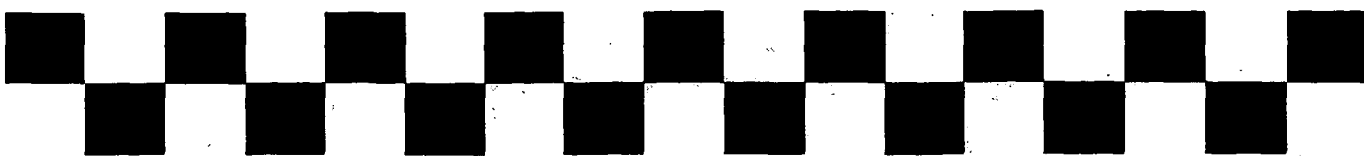
### **PROGRAM SUMMARY:**

To meet Maryland's mandated waste reduction of 15 percent, four neighboring, rural counties decided to share resources: equipment, staff, costs, information, and markets. Each county has its own facility that receives collected items. Among the four counties there are 31 Igloo dropoff and five regular dropoff sites; one county has curbside pickup.

The success of the program is attributed to the cooperative marketing of the materials. Prior to this cooperative program, smaller communities always had difficulties competing with larger jurisdictions in marketing their materials. Now the markets prefer to work with the regional cooperative rather than other individual communities. All material is marketed through one program but there are five facilities that collect and deliver the recyclables. Batteries, tires, white goods, and yard waste must be delivered to one of the 14 transfer stations in the region.

There is little processing of materials besides initial separation and occasional baling. The program is currently diverting 7 percent of the area's waste stream and another 18 percent is diverted by the private sector. A regional landfill operated by an outside agency levies a 10 percent surcharge on every ton of waste disposed of, which generates \$250,000 a year to help fund the regional cooperative program.

**CONTACT: BERYL FRIEL REGIONAL  
COORDINATOR  
100 GIBSON AVE.  
CHESTERTOWN, MD 21620  
(410) 778-7403**



## **COMPOSTING/MULCHING**



## **CRAB & FISH WASTE COMPOSTING**

### **WASTE TYPE:**

Crab and fish waste.

### **PROGRAM LOCATION:**

Princess Anne, population 22,000, is located in Maryland at the head of the Monokin River. It is a highly-cultivated truck-crop area.

### **PROGRAM SUMMARY:**

Six to eight local crab companies in Somerset County deshell and clean fresh crabs. Because crab and fish waste is very wet and heavy, the waste is very costly to landfill. As an alternative the crab companies devised a system to divert crab waste to a composting operation, during crab season, April to October. The companies arranged to have a local farmer develop a windrow compost pile consisting of the crab waste and a bulk additive of wood chips. The farmer provides land and turns the windrow pile. In return the farmer receives a tipping fee and is able to use the finished compost on his farm. Initially, there were some complaints about odor. The farmer relocated the pile to a more remote section of his farm and the problem was alleviated. An estimated 100 tons of crab waste were composted in one season.

**CONTACT: CHARLES CAVANAUGH**  
**424 N. SOMERSET AVE.**  
**PRINCESS ANNE, MD 21853**  
**(410) 651-9641**



## **CRAB WASTE COMPOSTING**

### **WASTE TYPE:**

Crab waste.

### **PROGRAM LOCATION:**

Cambridge, Md., population 10,000 is located along the south shore of the Choptank River in Dorchester County. Cambridge's economy is based on agriculture, seafood, timber and manufacturing.

### **PROGRAM SUMMARY:**

There are about 40 blue crab processing companies in Dorchester County. Crab waste is costly to landfill because it is wet and heavy. The University of Maryland Agricultural Services initiated a joint composting effort between the crab companies and New Earth Services (a local composter). Crab waste or chum is mixed with woodchips or sawdust, placed in compost windrows 5,000-6,000 yds at a closed landfill, monitored for oxygen levels, and covered daily. There have been few odor complaints.

The finished product belongs to New Earth Services and is sold in bulk or in small bags to home gardeners. New Earth Services delivers the compost to Baltimore and Washington, D.C. The compost is consistently high in quality so New Earth Services is able to sell it for a premium price. The University is currently conducting research on the crab compost. Some researchers believe that a chemical in crab shells, called Chitin, is possibly a natural pesticide and fungicide. The success of this program is attributed to the strong demand for soil amendments in the state. The calcium content neutralizes the acid soil prevalent in the region.

**CONTACT: PAT CONDON**  
**306 MILL ST.**  
**CAMBRIDGE, MD 21613**  
**(410) 221-6057**



## **MIXED WASTE COMPOSTING**

### **WASTE TYPES:**

Food waste, mixed paper, junk mail, paperboard, tissue paper, and leaves.

### **PROGRAM LOCATION:**

Bowdoinham is a small, rural, residential community of 2,189 located in Sagadahoc County, 30 miles north of Portland, Maine. A military shipyard is the main employer in the community.

### **PROGRAM SUMMARY:**

A pilot food waste, mixed paper and leaf compost study was undertaken by the town, Bowdoin College and Compost Futures, and sponsored by the state waste management agency. Employees in the college's two cafeterias separated food waste into 30-gallon containers five days a week. Over a three month period the college averaged 110 gallons of food waste/day. The school provided transportation of the food waste and environmental studies students volunteered their time to deliver the waste to the compost site. In 1990 a grant for \$1,000 was used to develop an 80-ft by 200-ft gravel-based compost site. The study was funded by three \$500 grants from the town of Bowdoinham, Bowdoin College, and a local private firm called Compost Futures. In addition, the Maine Waste Management Agency provided a \$3,500 grant.

The Recycling Barn, the town's recycling facility, opened in 1989. Workers use a shredder, donated by Pen-Day Equipment Co., to shred mixed paper, including junk mail, paper board, and tissue paper. Two tons of leaves previously stored at the Bowdoinham Landfill were windrowed with 8 tons of the shredded paper waste. Students mixed the food waste with shredded paper waste on one of the windrows and mixed the other half with the leaf waste. Compost Futures lent a Wildcat turner and the windrow pile was turned every 10 days to four weeks. There were no reports of odor or vermin problems. Approximately 26 tons of leaves, food waste, and mixed paper were composted. The finished compost was used as landfill cover, saving the town between \$8 and \$10/cu yd when the landfill was closed.

**CONTACT: DAVID BERRY  
RFD ONE, BOX 1410  
BOWDOINHAM, MAINE 04008  
(207) 666-3228**



## **WASTE TYPE:**

Christmas trees.

## **PROGRAM LOCATION:**

El Dorado is a rural area in the Sierra Nevada foothills of central California with a population of 130,000. Elevations range from 200 to almost 11,000 ft. Agriculture and timber provide the economic base; the U.S. Forest Service owns 44 percent of the land.

## **PROGRAM SUMMARY:**

The El Dorado County Environmental Management Department coordinates the Christmas Tree Recovery Program which recovered more than 14,000 trees in one year. Residents of El Dorado County were offered a free seedling for dropping off their Christmas trees; the trees were chipped and used for mulch. Two Safeway markets participated in the "Tree for a Tree" program in Cameron Park and Placerville, which served as dropoff sites on December 28-29 and January 4-5.

Companies participating in the program included: Georgia-Pacific, Michigan-California Lumber Company, Tree Service Unlimited, and Kimball Tree Service. The lumber and tree service companies provided volunteers to operate city and county chippers. Other volunteers, including members of the California Conservation Corps, helped with site staffing and processing. Chips generated in Placerville and Cameron Park were divided between residents, the local Parks Department, and private orchards that used the chips for mulch. Chips generated in South Lake Tahoe were also given to residents and to the Parks Department for use on park trails.

Total cost of the program would have been approximately \$9,700 without the sponsors. The estimated cost to the county was less than \$250 for coordination and planning by paid staff; all other labor was provided by volunteers. Promotional costs for a one-page program flyer were not calculated but were minimal.

**CONTACT: JON MORGAN  
EL DORADO COUNTY ENVIRONMENTAL MANAGEMENT DEPARTMENT  
2850 FAIRLANE COURT  
PLACERVILLE, CA 95667  
(916) 621-6672**



## LAWN MULCHING

### WASTE TYPE:

Grass clippings

### PROGRAM LOCATION:

More than 200 cities in Texas have implemented this program.


### PROGRAM SUMMARY:

Dr. Bill Knoop, Texas A&M Extension Turfgrass Specialist, is responsible for developing this highly-successful "Don't Bag It" lawn care program in Texas. The program advises homeowners to leave grass clippings on their lawns when mowing, rather than bagging the clippings and throwing them in the garbage. The grass clippings decompose quickly and release valuable nutrients back into the soil. This lawn care technique saves homeowners time and money while contributing to healthier-looking lawns. The program also saves municipalities money in avoided disposal costs and extends the life of landfills.

Dr. Knoop initiated a pilot "Don't Bag It" project in Plano, Texas, in 1981. The city surveyed the grass clipping problem by collecting and weighing bags of grass clippings from an estimated 17,000-18,000 homes in the city. The survey revealed that grass clippings made up 23 percent of the waste stream, amounting to an estimated 700 tons/week.

A public meeting called held to promote the program and a press conference was held at a local landfill in early spring. Local extension agents, extension volunteer master gardeners, and members of local civic groups gave presentations on the program. Interested homeowners agreed to follow mowing/fertilizing guidelines specified in the "Don't Bag It" program. Display signs were placed in their front yards, and they were given free fertilizer for their efforts. Participating homeowners documented the frequency and duration of mowings and rated the quality of the turf before and after the program.

Homeowners participating in the "Don't Bag It" program mowed their lawns on average one more time per month when they left the clippings on their lawns compared to when they bagged the clippings. However, these homeowners spent 30 to 40 percent less time maintaining their lawns because no time was spent bagging clippings. Participants were also able to decrease their fertilizer use by 50 percent and still have healthy, green lawns. The city of Plano saved \$100,000 in disposal costs and reduced the amount of garbage disposed of in landfills by more than 20 percent.



The "Don't Bag It" program has proved to be highly successful in Texas. By 1993, over 200 cities in Texas have set up the program, and variations of the program have spread throughout the country. Dr. Knoop has developed a "Don't Bag It" Lawn Care Plan filled with fact sheets, sample press releases, and other information designed to help local governments implement programs in their communities.

**CONTACT: DR. BILL KNOOP  
TEXAS A&M UNIVERSITY SYSTEM  
17360 COIT ROAD  
DALLAS, TEXAS 75252-6599  
214/231-5362**

**PROFESSIONAL LAWN CARE ASSOCIATION OF AMERICA  
1000 JOHNSON FERRY ROAD, SUITE C 135  
MARIETTA, GEORGIA 30068-2112  
(404) 977-5222**



## **PINE NEEDLE DIVERSION**

### **WASTE TYPE:**

Pine needles.

### **PROGRAM LOCATION:**

El Dorado is a rural area in the Sierra Nevada foothills of central California with a population of 130,000. Elevations range from 200 to almost 11,000 ft. Agriculture, tourism, and timber provide the economic base; with 70 percent of the land owned by the federal government.

### **PROGRAM SUMMARY:**

Increasing transportation costs and diminishing landfill space led Forest Service, the USDA Soil Conservation Service, the City of South Lake Tahoe, and El Dorado County to join together to in a program to collect and stockpile pine needles, wood chips and green plant material for various erosion control projects. Tree residue currently constitutes 18 percent of the South Lake Tahoe Basin annual waste stream. The majority of this percentage is pine needles from the urban areas, which formerly were bagged as refuse, and transported 194 miles roundtrip to be landfilled.

During the month of June 1993, organic materials were collected by the City of South Lake Tahoe, El Dorado County and South Tahoe Refuse, Inc. Voluntary dropoff days on each Saturday of the month resulted in collection of approximately 320 cu yds of pine needles, cones and branches. South Tahoe Refuse collected 2300 cu yds in one week of curbside pickup. Assisting in the collection efforts were crews from the California Conservation Corps.

The gathered materials were mulched with 70 cu yds of nutrient-rich aquatic waste from the Tahoe Keys Property Owners Association. The mulch was baled and used for erosion control efforts. The Forest Service transports the bales to erosion control sites, breaks them open and blows the mulch onto hillsides of the exposed land.

Funding for this cooperative project, was provided by the Forest Service, the Soil Conservation Service, Tahoe Resources Conservation District, The City of South Lake Tahoe and Tahoe Keys Property Owners Association.

**CONTACT: JON MORGAN  
EL DORADO COUNTY ENVIRONMENTAL MANAGEMENT DEPARTMENT  
2850 FAIRLANE COURT  
PLACERVILLE, CA 95667  
(916) 621-6672**



## IV. HOUSEHOLD HAZARDOUS WASTE

### INTRODUCTION

Household Hazardous Waste (HHW) is any material that contains hazardous substances which when improperly discarded from homes may threaten human health or the environment. Examples of HHW include leftover paint, used oil, pool chemicals, and cleaning chemicals that are commonly found in the home. Industries must follow strict regulations when handling and disposing of these chemicals to ensure that humans, animals and the environment are not harmed. The public must also learn to handle and dispose of HHW properly.

Improper handling or disposal of HHW can result in serious accidents:

- children can be seriously harmed by drinking, eating, touching, or breathing toxic household chemicals;
- refuse haulers and disposal site workers can be injured by discarded HHW (e.g., exploding aerosol cans, chemicals splashing on their face and hands, or poisonous fumes created by mixed chemicals);
- fire fighters can be injured by these hazardous household chemicals when responding to a fire;
- groundwater used for drinking or irrigation can be contaminated when household hazardous waste products are poured or seep into the ground;
- bacteria needed to break down sewer and septic tank wastes can be destroyed by untreated HHW.

In response to these problems, HHW collection programs are being developed by local governments. A HHW program can be a special event or a permanent facility organized by a city or county to safely collect, recycle, and dispose of HHW. Collection programs may accept all HHW or only recyclables such as used oil, batteries, antifreeze, and latex paint. Some programs also include "material exchanges," which allow leftover materials to be used by someone else rather than being thrown away.



## **COLLECTION EVENTS: GREENFIELD, MASSACHUSETTS**

### **WASTE TYPES:**

Household Hazardous Waste

### **PROGRAM LOCATION:**

Greenfield, population 18,600, is an industrial and agricultural town in Massachusetts specializing in poultry, tobacco, onions, and dairy products.

### **PROGRAM SUMMARY:**

Bob Rottenberg developed a household hazardous waste collection program that includes 15 small communities ranging in population from 375 to 18,600 and totaling 65,000. It took him only six to eight weeks to set up and start the program which requires one representative from each town and a contractor who bids to pick up the waste. There are four host communities, in which the contractor sets up a dropoff location for the hazardous waste. Participants who do not live in the host community must drive the waste to the nearest site. There are four collection days a year.

To pay for the program each participating town allocates money, about \$75 per household. Some communities, because of high demand, asked households to pre-register before the collection day and allocated the money accordingly. Other communities had no pre-registration and simply allocated the money after the waste was dropped off. Volunteers from each community staff the dropoff site. Most of Mr. Rottenberg's time is spent on pre-registration and advertising for the collection days. Advertising consists of ads in newspapers, mailers, and radio announcements. The last collection day had 713 participating households. Of these, 218 were pre-registered. That day 6,825 gallons of various hazardous wastes and 203 car batteries were collected. There is a 10-gallon or 100-lb limit per participant, not counting motor oil. Mr. Rottenberg felt that public awareness was a major factor in the success of the program which had an average 4 percent participation rate. Future plans are to recycle all of the paint collected at the events.

**CONTACT: BOB ROTTENBERG  
324 WELLS ST.  
GREENFIELD, MASSACHUSETTS 01301  
(413) 772-2438**



## **COLLECTION EVENTS: HUMBOLDT COUNTY, CALIFORNIA**

### **WASTE TYPES:**

Household hazardous waste.

### **PROGRAM LOCATION:**

Humboldt County, population 123,600, is a heavily-forested Northern California coastal county. Roughly 250 miles north of San Francisco, much of the population is clustered along major transportation routes. Logging, agriculture and tourism provide the economic base.

### **PROGRAM SUMMARY:**

Household hazardous waste (HHW) collection events are open to all residents in Humboldt County and participation is widespread. Small-quantity business generators are also allowed to participate. Advertising efforts include public service announcements and/or paid advertisements in county print publications, and on local television and radio stations. A cooperative agreement between all jurisdictions to participate in the countywide collection event was only verbal; a written agreement is being developed.

Collection events are held at various locations throughout the county. Vehicles are lined up in the parking area and fed into the loading area two at a time. Surveys are conducted as participants wait to enter and unload. Motor oil, paint, and wet-cell batteries are unloaded on one side and all other HHW on the other. They had a total of 960 vehicles and 1260 households participate at three separate locations and collected 84,829 pounds of HHW.

**CONTACT: ELIZABETH CITRINO  
100 H. STREET, SUITE 100  
EUREKA, CA 95501  
(707) 441-2005**



## **COLLECTION EVENTS: SHASTA COUNTY, CALIFORNIA**

### **WASTE TYPES:**

Household hazardous waste.

### **PROGRAM LOCATION:**

The Shasta District Fairgrounds is located in Anderson, Calif., at the northern end of the Sacramento Valley. Almost half of Shasta County's population (161,000) is located in the City of Redding (70,000). Primary industries are lumber, manufacturing, recreation, and tourism.

### **PROGRAM SUMMARY:**

Shasta County's Household Hazardous Waste (HHW) programs are two-pronged. First they have public education and awareness activities emphasizing the need to reduce HHW generation and subsequent illegal disposal. Presentations and related education-oriented programs and materials are available to County schools and other organizations by request. Secondly Shasta County co-sponsored with the City of Redding two HHW collection days in 1991 and 1992 for all County residents and collected a total of 51 tons. The City of Redding is also in the process of developing a permanent HHW facility.

**CONTACT: CARLA SERIO  
1640 WEST STREET  
REDDING, CA 96001  
(916) 225-5787**



## **COLLECTION EVENTS: EL DORADO COUNTY, CALIFORNIA**

### **WASTE TYPES:**

Household hazardous waste.

### **PROGRAM LOCATION:**

El Dorado, population 137,200, is a rural county in the Sierra Nevada foothills of central California. Elevations range from 200 to almost 11,000 ft. Agriculture and timber provide the economic base the U.S. Forest Service owns 44 percent of the land.

### **PROGRAM SUMMARY:**

One-day collection events are offered each fall and spring in Placerville and in South Lake Tahoe. Two separate days are scheduled at each site. Operating from 9 a.m. to 3 p.m.; eligible business waste is received from 1 p.m. to 3 p.m. at no charge. All household hazardous waste was accepted from households and from businesses generating 100 kg or 220 lbs or less per month. Waste not accepted are: radioactive or biohazardous wastes, dioxin bearing wastes, compressed gas and explosives. Events are held at the County Department of Transportation Corporation Yard in Placerville and the South Tahoe Refuse transfer station in South Lake Tahoe. All waste oil, paint and lead-acid batteries are processed for recycling.

**CONTACT: JON MORGAN  
EL DORADO COUNTY ENVIRONMENTAL MANAGEMENT DEPARTMENT  
2850 FAIRLANE COURT  
PLACERVILLE, CA 95667  
(916) 621-6672**



## **COLLECTION EVENTS: YOLO COUNTY, CALIFORNIA**

### **WASTE TYPES:**

Household hazardous waste.

### **PROGRAM LOCATION:**

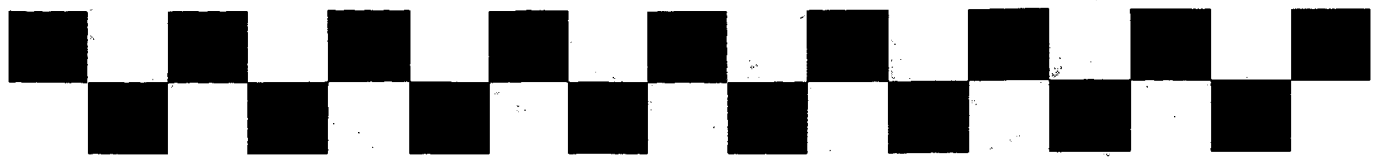
Yolo County has four incorporated cities and one University of California Campus in the unincorporated county. The majority of the county is agricultural. Total County population is 149,200 including the population of the UC Davis campus, the county population rises to 171,915.

### **PROGRAM SUMMARY:**

The Yolo County HHW Collection Program consists of six, one-day collection events held at the Yolo County Central landfill. Initiated in 1983, the events are designed to meet the overall program objectives for residents to "poison proof" their homes, and also to eliminate or divert these elements of the municipal solid waste stream. The county is also planning a small-quantity generator program.

The equivalent of 82,130 lbs of household hazardous waste was collected and properly disposed of in one year.

**CONTACT: MICHAEL ROCK  
600 A ST., SUITE 158  
DAVIS, CA 95616  
(916) 757-5566**



## **PERMANENT COLLECTION FACILITY: MERCED, CALIFORNIA**

### **WASTE TYPE:**

Household hazardous waste.

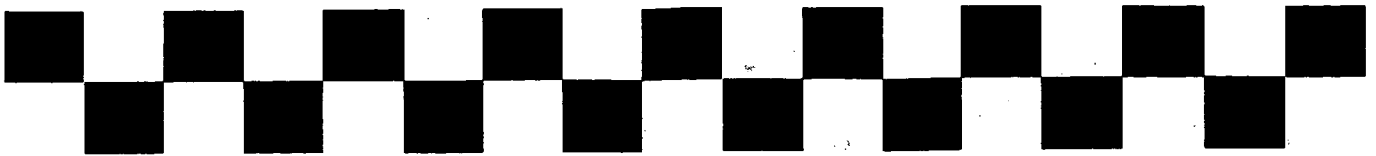
### **PROGRAM LOCATION:**

Merced County, population 187,100, is primarily a livestock, agricultural and food processing county in central, California.. Castle Air Force Base is located in the City of Atwater and Foster Farms Chicken processing plant is located in the City of Livingston.

### **PROGRAM SUMMARY:**

Pesticide disposal is a primary concern for this agricultural county. The Merced County Household Hazardous Waste (HHW) Element selected both load checking and construction of a permanent collection site as necessary programs for their HHW program. Phase 1 consists of load checking and one-day dropoff events for batteries, oil, and paint while constructing the permanent facility. Phase 2 will be operational in the late Spring of 1994, and will consist of the permanent HHW collection facility which will also host the annual agricultural pesticide collection event. In addition, one-day collection events will be held which will accept a wide variety of HHW products.

**CONTACT: ROBERT WIECHERT  
385 E. 13TH STREET  
MERCED, CA 95340  
(209) 385-7391**



## **V. FINANCING INTEGRATED WASTE MANAGEMENT PROGRAMS**

### **INTRODUCTION**

The funding section of this cookbook is meant to outline both conventional and creative approaches to easing the financial burdens placed on local jurisdictions by new state and federal waste management requirements. The cookbook's focus is on describing programs that have been successfully carried out in rural jurisdictions. In this section, we go beyond those loan and grant programs normally used to fund solid waste management activities to include any sources of funds that could potentially be tapped to help fund a solid waste program or project. This includes programs as diverse as grants for economically-depressed areas, rural business enterprise grants and loans, and community service grants for the developmentally disabled. Staff for each agency cited reviewed the summaries to ensure accuracy and determine if the program could fund solid waste programs or facilities. If your community cannot use the funding sources described for your planned solid waste management programs or projects, you may be able to use the funds for some other project. Having a bigger revenue pie to divide between competing programs can also benefit your solid waste program.

There are essentially two components to this section. The first section is a summary of sources of operating revenue and the development of markets for recyclables. The next section provides a brief description of a variety of assistance programs, how to apply for the assistance, and examples of programs that have received assistance.



## **SOURCES OF OPERATING REVENUE**

There are a variety of ways to generate operating revenues for recycling programs.

### **Rate-Based Financing**

Flat fees, wherein generators of household or commercial waste pay the same amount for pickup service, are based on calculations from historical data and allocated equally within a service-level group. Variable fees are assessed upon actual use by weight or volume of the wastes disposed and have proven very effective in reducing wastes.

### **Disposal Fees**

Disposal or tipping fees are assessed on the number of tons or cubic yards of waste accepted at a transfer station, landfill or incinerator. Import fees are disposal fees placed on waste accepted from another jurisdiction. Disposal fees are usually set to recover costs plus a profit margin for the owner. Increasing tipping fees, although difficult politically, can provide local governments with a substantial source of revenue, and encourage source reduction and recycling.

### **Recycling Rebates**

As part of the collection contract, a private hauler handling collection of both waste and recyclables may be required to pay a recycling rebate to the municipality. The hauler rebates the municipality a specified amount per ton of recyclable material collected, based on the fact that the recyclable material has a market value.

### **Material Revenues**

Revenue from the sale of recyclable materials is another source of income. The amount of this revenue will vary, depending on market conditions.

### **Franchising Fees**

Franchising fees are paid by collection contractors to the local government. These fees can be tiered to help small, local haulers by requiring collectors to pay higher fees than small collectors.

### **Permit and Business License Fees**

Permit fees assessed to landfill operators or firms that provide waste management services provide another source of revenue and are a mechanism for bringing the commercial sector into the fee system. New permits or fees can be established, or existing fees may be increased to create revenue for new programs.

### **Landfill or Refuse Collection Business Taxes**

Special taxes may be assessed upon landfills and the funds set aside specifically for funding recycling programs.



### **Special Assessments or Levies**

Special assessments raise revenues through the imposition of assessments on properties within identified geographic areas for specific projects that will benefit those properties.

### **General Fund Revenues**

Although some communities use the general fund to support solid waste programs, this is not an attractive source of funding because of competing demands and legal limitations on increasing general fund revenues.

### **Fines and Penalties**

Fines and penalties may contribute a small amount to the support of recycling programs.

### **Keeping Track of Revenues and Expenses Through an Enterprise Fund**

An enterprise fund is a method of accounting for revenues and expenses spent on solid waste management programs and separating them from the general fund. Such an accounting system has advantages when a jurisdiction is financing solid waste management facilities.

## **DEVELOPING MARKETS FOR RECYCLABLES**

Because revenues gained from the sale of recyclable materials can have a significant impact on the total cost to the community of a recycling program, local governments should take a careful look at market development issues.

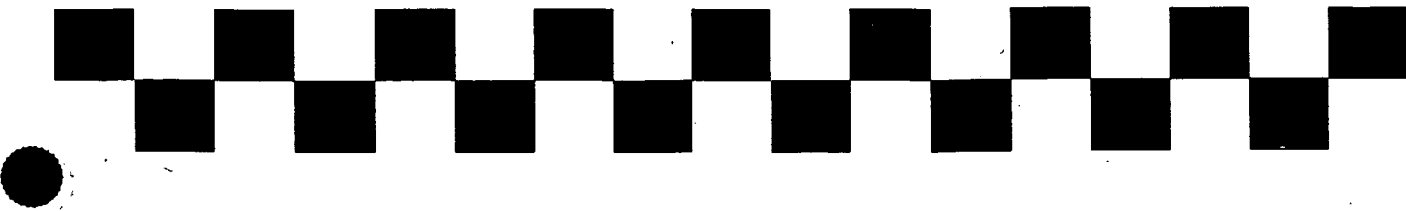
### **Factors Influence the Value of Recyclables**

The value of recyclables will be affected by the quality of the product. In terms of quality, the less contamination that is present, the higher the value of the commodity. Separation as close to the source as possible will generally provide the highest quality product.

Transportation requirements and the laws of supply and demand also affect market value. Because transportation costs can sometimes equal or exceed the value of the recyclables, it is important to develop local markets. Supply and demand is difficult to control. It is prudent to identify materials that have limited markets and to develop local markets and/or source reduction strategies for those materials - or to make provisions to store the product until the market improves.

### **Maximizing Revenues**

There are at least three steps a local government can take to maximize the sales price of its collected recyclables.



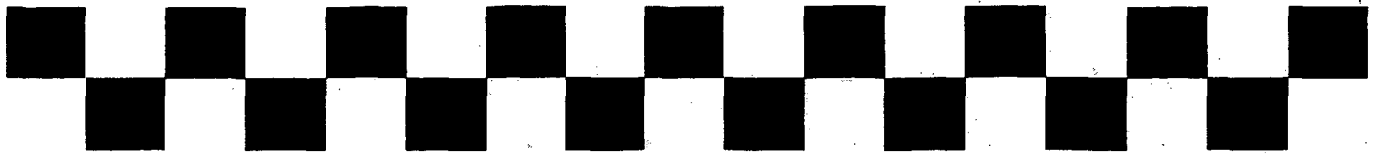
By helping develop businesses that will be using recyclables as raw materials for making new products, communities can increase markets and build stronger local economies. The staff and resources of the community's economic development office should be helpful for this purpose.

Local procurement policies and ordinances represent another important market development tool. Numerous local governments have given purchasing preference to recycled products. Some have agreed to purchase the recycled products produced by a specific business in exchange for that business locating in the community.

In some areas, local jurisdictions are joining together to strengthen their market position. Such marketing cooperatives may focus on stabilizing the supply of recyclables, assuring uniformly high quality standards, and/or assisting in the development of regional businesses that utilize recycled material.

#### **Plugging into California's State Market Development Programs**

The State of California has established programs that provide financial resources for market development activities. The Recycling Market Development Zone (RMDZ) program helps increase demand for secondary materials and thereby assist local governments to achieve waste diversion goals. Through a partnership between state and local agencies, the RMDZ program provides a variety of financial and technical assistance to businesses located in zones. Local governments which establish an RMDZ become part of a statewide network of economic development professionals working to develop recycling businesses. In addition to the state low-interest loan program (described below), RMDZs have access to direct financial consulting assistance, technical support regarding recycling technologies, secondary material markets, feedstock availability and other issues, and benefit from state-sponsored marketing and business referral efforts. In addition, RMDZs may be given special consideration by the Board in allocating funds to support local governments. For example, in March 1994, the Board allocated \$25,000 in direct financial support for each RMDZ. As a partner in the RMDZ program, local governments are expected to market their program and provide additional incentives and assistance, such as local permitting assistance, siting assistance and feedstock availability information. Applications are accepted on an annual basis. RMDZs are selected through a competitive process based on annually selected program objectives. Current objectives may be obtained by calling the Board. Communities designated as a Market Development Zone are also eligible to apply for a low-interest loan to cover the costs of specified projects that support the use of post-consumer waste (See page 100).



# **GRANTS**



## **SOLID WASTE MANAGEMENT ASSISTANCE**

### **PURPOSE OF GRANT:**

To promote Integrated Waste Management (IWM) systems.

### **DESCRIPTION OF THE PROGRAM:**

This grant promotes the use of IWM systems to solve public solid waste generation and management problems at the local, regional and national levels. Projects can include training, surveys, public education programs, studies and demonstrations. Currently the majority of the funding is being given to market development activities.

### **WHO MAY APPLY:**

Funds may be awarded to the following non-profit entities: federal, state, interstate, intrastate and local public authorities, public agencies and institutions, private agencies, institutions and individuals, and Indian tribes.

### **APPLICATION CRITERIA:**

Funds awarded from the national office are for projects that develop a model that can be replicated by other jurisdictions throughout the United States. Regional grants and contracts do not need to meet this requirement.

### **PROVIDED BY:**

U.S. Environmental Protection Agency.

Annual funding level: \$5,100,000 available for national programs; \$2,000,000 available to split between the 10 regions for local disbursement.

Disbursement range: \$5,000 to \$4,000,000.

**CONTACT: BRUCE WEDDLE  
MUNICIPAL SOLID WASTE MANAGEMENT PROGRAM  
OFFICE OF SOLID WASTE, OS-301, EPA  
WASHINGTON, DC 20460  
(202) 260-9872**



## **ENVIRONMENTAL EDUCATION GRANTS PROGRAM**

### **PURPOSE OF GRANT:**

Environmental education.

### **DESCRIPTION OF THE PROGRAM:**

Priority will be given to projects that develop an environmental education practice, method, or technique that is new or significantly improved; that demonstrate the potential for wide application; and that address a high priority environmental issue. Priority will also be given to projects that close important gaps in the field of environmental education, placing special emphasis on educator workshops. Technical training activities directed toward environmental management professionals or activities primarily directed toward support of noneducational research and development are not eligible for funds. This program requires matching funds.

### **WHO MAY APPLY:**

Any local or tribal education agency, college or university, state education or environmental agency, not-for-profit organization, or noncommercial educational broadcasting entity may submit a pre-application.

### **APPLICATION CRITERIA:**

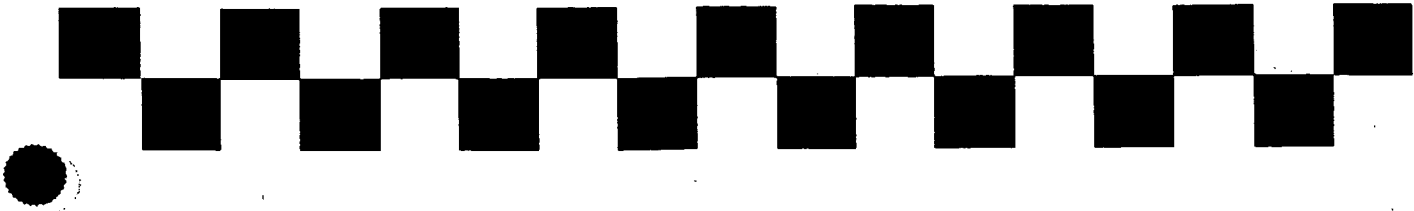
The purpose of the EPA grants program is to stimulate environmental education by supporting projects that design, demonstrate, or disseminate practices, methods, or techniques related to environmental education. The pre-application is limited to five pages for grants of \$5,000 or less and 10 pages for grants above that amount.

### **PROVIDED BY:**

U. S. Environmental Protection Agency.

Annual funding level: \$170,000 for region 10 in 1993.

Disbursement range: \$5,000 - \$250,000. Half of the grant money is reserved for grants of \$5,000 or less.



Example: The Humboldt County Office of Education received a grant of \$4,950 to set up a County-wide Waste Reduction Task Force of administrators, maintenance personnel, parents, students and teachers. Contact Garry Eagles: (707) 445-7030.

**CONTACT: IDA TOLLIVER  
ENVIRONMENTAL PROTECTION AGENCY  
75 HAWTHORNE STREET  
SAN FRANCISCO, CA 94105  
(415) 744-1581 OR (415) 744-1582**



## **ENFORCEMENT ASSISTANCE GRANT PROGRAM**

### **PURPOSE OF GRANT:**

To enhance solid waste facilities permit and inspection programs.

### **DESCRIPTION OF THE PROGRAM:**

The purpose of the program is to award grants to Local enforcement agencies to enhance solid waste facilities permit and inspection programs. Funds for this program are disbursed from the IWM Account.

### **WHO MAY APPLY:**

Any certified (LEA).

### **APPLICATION CRITERIA:**

Enforcement Assistance Grant funds must be used to supplement, not replace, the existing budget for LEA programs. Additionally, applicants must agree that the money will be set up in a separate account, will be used only for support of the LEA's solid waste facility permit and inspection programs, and that appropriate records will be kept for the Board's audit program.

### **PROVIDED BY:**

California Environmental Protection Agency - CIWMB

Annual funding level: \$1,500,000.

Disbursement range: \$15,000 - \$138,600.

Examples: Amaoor - \$16,072; Butte - \$18,623; Colusa - \$16,715; Del Norte - \$16,140; Imperial - \$26,815.

**CONTACT: MARC ARICO  
CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD  
8800 CAL CENTER DRIVE  
SACRAMENTO, CA 95826  
(916) 255-2402**



## **LOCAL TECHNICAL ASSISTANCE PROGRAM**

### **PURPOSE OF GRANT:**

To benefit areas of severe economic distress.

### **DESCRIPTION OF THE PROGRAM:**

Grants awarded under the Local Technical Assistance program are designed to help in solving specific economic development problems, respond to developmental opportunities, and build and expand local organizational capacity in distressed areas. In responding to specific problems and opportunities, a local economic development organization might focus on military base and industrial plant closings, on deteriorating commercial districts, and on technical or market feasibility studies. The maximum grant is 75 percent of program cost.

### **WHO MAY APPLY:**

Eligible applicants include public or private non-profit national, state area, district, or local organizations; public and private colleges and universities; Indian tribes; local governments; and state agencies. In special circumstances applications may be accepted from private individuals, partnerships, firms, and corporations.

### **APPLICATION CRITERIA:**

Priority consideration for funding is given to proposals that benefit areas of severe economic distress; lead to near-term generation or retention of private sector jobs; are consistent with the EDA-approved Overall Economic Development Program; document strong local support in terms of financial commitment, and public and private leadership involvement; promote economic diversification; and focus on a distressed rural area, or state and federally-designated enterprise zones.

### **PROVIDED BY:**

U.S. Department of Commerce - Economic Development Administration.

Annual funding level: \$1,000,000.

Disbursement range: \$5,000 - \$35,000.

### **CONTACTS:**

**NORTHERN CALIFORNIA - DEENA R. SOSON (916) 551-1541**  
**CENTRAL CALIFORNIA - BILL LEWIS (916) 551-2160**  
**SOUTHERN CALIFORNIA - CHUCK OAKS (310) 575-7286**  
**ECONOMIC DEVELOPMENT ADMINISTRATION**  
**1345 J STREET, SUITE B**  
**SACRAMENTO, CA 95814**



## **LONG-TERM ECONOMIC DETERIORATION PROGRAM**

### **PURPOSE OF GRANT:**

To reverse severe long-term economic decline.

### **DESCRIPTION OF THE PROGRAM:**

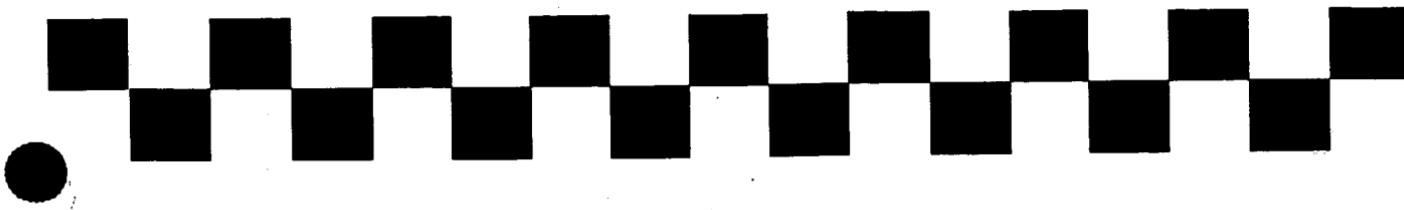
To assist applicants in developing or implementing strategies designed to halt or reverse the long-term decline of their economies. The most common type of activity funded under this program is revolving loan funds, although other types of eligible activities may be funded. The program is designed to help areas overcome specific capital market gaps and to encourage greater private sector participation in economic development activities. In concert with private lenders, RLF grantees make fixed asset and/or working capital loans to area businesses. RLF projects support such activities as small business development, including start-ups and expansions; business and job retention; redevelopment of blighted land and vacant facilities for productive use; and support for growth industries and high-tech firms.

### **WHO MAY APPLY:**

The applicant must be one of the following: a designated Economic Development Agency or a non-profit organization determined by Economic Development Administration (EDA) to be the representative of a redevelopment area; an Economic Development District; a state; a political subdivision of a state or a consortium of such units; or an Indian tribe. Potential Revolving Loan Funds (RLF) must be located in Long-Term Economic Deterioration (LTED) eligible areas. To be eligible, an area must be experiencing at least one of three problems: very high unemployment, low per capita income, or chronic distress. Eligibility status is available from EDA's regional offices.

### **APPLICATION CRITERIA:**

EDA requires applicants to submit a proposal which is screened before the applicant is invited to make a formal proposal. Those interested should contact EDA for the proposal outline.



**PROVIDED BY:**

U.S. Department of Commerce - Economic Development Administration.

Annual funding level: \$17,500,000.

Disbursement range: \$150,000 - \$1,500,000.

**CONTACTS:**

**NORTHERN CALIFORNIA - DEENA R. SOSON (916) 551-1541**

**CENTRAL CALIFORNIA - BILL LEWIS (916) 551-2160**

**SOUTHERN CALIFORNIA - CHUCK OAKS (310) 575-7286**

**ECONOMIC DEVELOPMENT ADMINISTRATION**

**1345 J STREET, SUITE B**

**SACRAMENTO, CA 95814**



## **SUDDEN AND SEVERE ECONOMIC DISLOCATION (SSED) ECONOMIC ADJUSTMENT PROGRAM**

### **PURPOSE OF GRANT:**

To reduce the impact of severe economic changes in a community.

### **DESCRIPTION OF THE PROGRAM:**

Grants are provided to help develop and implement local economic adjustment strategies designed to anticipate and prevent an economic dislocation or to re-establish employment opportunities and economic stability as soon as possible after permanent job losses due to the dislocation occur. Strategy grants support the immediate development of a comprehensive response to an actual or threatened dislocation. Strategies describe the actions the community proposes to take to avert the dislocation or to generate re-employment opportunities for the dislocated workers. Implementation grants finance the implementation of one or more activities in an approved strategy. Types of implementation activities include the construction of public facilities, business loans, and technical or management assistance. Potentially this program could benefit rural communities that are losing their traditional industries, such as logging, fishing, mining, etc.

### **WHO MAY APPLY:**

An applicant must be one of the following: a designated economic development agency or a non-profit organization determined by the Economic Development Administration (EDA) to be the representative of a redevelopment area; an Economic Development District; a state; political subdivision of a state or a consortium of such units; or an Indian tribe.

### **APPLICATION CRITERIA:**

To be eligible, dislocations must have occurred within the preceding 12 months or be expected within two years from the date EDA is contacted, and must meet certain job-loss thresholds. Key selection factors include the severity of the dislocation and the responsiveness of the proposed project to the needs of the dislocated workers.



**PROVIDED BY:**

U.S. Department of Commerce - Economic Development Administration.

Annual funding level: 17,500,000.

Disbursement range: \$22,000 - \$1,250,000.

**CONTACTS:**

**NORTHERN CALIFORNIA - DEENA R. SOSON (916) 551-1541**

**CENTRAL CALIFORNIA - BILL LEWIS (916) 551-2160**

**SOUTHERN CALIFORNIA - CHUCK OAKS (310) 575-7286**

**ECONOMIC DEVELOPMENT ADMINISTRATION**

**1345 J STREET, SUITE B  
SACRAMENTO, CA 95814**



## **PLANNING PROGRAM FOR ECONOMIC DEVELOPMENT DISTRICTS, INDIAN TRIBES AND REDEVELOPMENT AREAS**

### **PURPOSE OF GRANT:**

Creation or retention of jobs for the unemployed or underemployed in areas of economic distress.

### **DESCRIPTION OF THE PROGRAM:**

Grants are provided to help develop and implement local economic adjustment strategies designed to anticipate and prevent an economic dislocation or to re-establish employment opportunities and economic stability as soon as possible after permanent job losses due to the dislocation occur. Strategy grants support the immediate development of a comprehensive response to an actual or threatened dislocation. Strategies describe the actions the community proposes to take to avert the dislocation or to generate re-employment opportunities for the dislocated workers. Implementation grants finance the implementation of one or more activities in an approved strategy. Types of implementation activities include the construction of public facilities, business loans, and technical or management assistance. Potentially this program could benefit rural communities that are losing their traditional industries, such as logging, fishing, mining, etc.

### **WHO MAY APPLY:**

Eligible applicants are Economic Development Districts, Redevelopment Areas, Indian tribes, organizations representing Redevelopment Areas or multiple Indian tribes, and commonwealths and territories.

### **APPLICATION CRITERIA:**

Among the factors EDA considers in evaluating proposals are economic distress of the area, past performance of previous-funded grantees, and involvement of the local leadership in economic development activities. Priority consideration goes to currently funded grantees.



**PROVIDED BY:**

U.S. Department of Commerce - Economic Development Administration.

Annual funding level: District, \$18,583,000; Indian, \$2,901,000.

Disbursement range: District, \$56,000 - \$113,000; Indian, \$30,000 - \$174,000.

**CONTACT:**

**NORTHERN CALIFORNIA - DEENA R. SOSON (916) 551-1541**

**CENTRAL CALIFORNIA - BILL LEWIS (916) 551-2788**

**SOUTHERN CALIFORNIA - CHUCK OAKS (310) 575-7286**

**ECONOMIC DEVELOPMENT ADMINISTRATION**

**1345 J STREET, SUITE B**

**SACRAMENTO, CA 95814**



## **PUBLIC WORKS AND DEVELOPMENT FACILITIES PROGRAM**

### **PURPOSE OF GRANT:**

To help distressed communities generate jobs.

### **DESCRIPTION OF THE PROGRAM:**

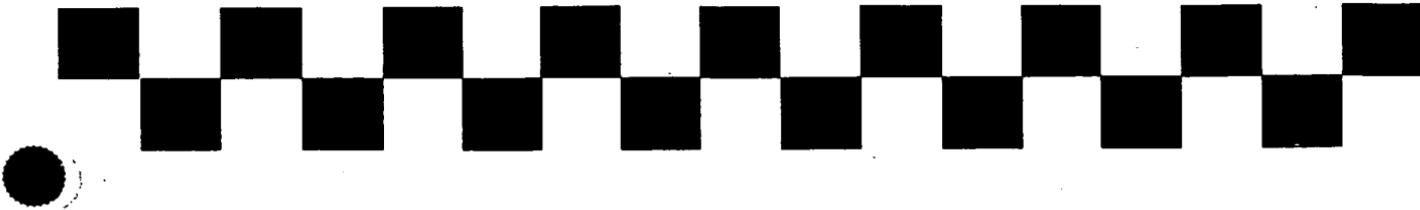
Grants are provided to help distressed communities attract new industry, encourage business expansion, diversify economies, and generate long-term, private sector jobs. Types of projects funded are water and sewer facilities primarily serving industry and commerce; access roads to industrial sites or parks; infrastructure; port improvements; and business incubator buildings. Proposed projects must be located within a EDA-designated redevelopment area. Projects must be consistent with an approved overall economic development program for the redevelopment area.

### **WHO MAY APPLY:**

An applicant may be a state, political subdivision of a state, Indian tribe, special-purpose unit of government, or public or private non-profit organization or association representing a redevelopment area or part thereof.

### **APPLICATION CRITERIA:**

Priority consideration shall be given to projects that improve opportunities for the successful establishment or expansion of industrial or commercial plants or facilities; assist in creating or retaining private sector jobs; benefit the long-term unemployed and members of low-income families residing in the area served by the project; and fulfill a pressing need of the area. Projects must be started and completed in a timely manner and demonstrate adequate local funding support.



**PROVIDED BY:**

U.S. Department of Commerce - Economic Development Administration.

Annual funding level: \$160,000,000.

Disbursement range: \$150,000 - \$2,000,000.

**CONTACTS:**

**NORTHERN CALIFORNIA - DEENA R. SOSON (916) 551-1541**

**CENTRAL CALIFORNIA - BILL LEWIS (916) 551-2160**

**SOUTHERN CALIFORNIA - CHUCK OAKS (310) 575-7286**

**ECONOMIC DEVELOPMENT ADMINISTRATION**

**1345 J STREET, SUITE B  
SACRAMENTO, CA 95814**



## **WATER AND WASTE DISPOSAL GRANTS**

### **PURPOSE OF GRANTS:**

To reduce water and waste disposal user costs to a reasonable level for rural users.

### **DESCRIPTION OF THE PROGRAM:**

Grants may be used to construct, repair, improve, expand or otherwise modify waste collection, pumping, treatment or other disposal facilities. Facilities to be financed may include such items as sewer lines, treatment plants including stabilization ponds, storm sewer facilities, sanitary landfills, incinerators, and necessary equipment. Grants may also be used to pay necessary fees, such as legal and engineering fees associated with the development of the facilities and other costs, including the acquisition of rights-of-way and easements and the relocation of roads and utilities. Grants may be used to finance facilities, together with funds from other agencies or those provided by the applicant.

### **WHO MAY APPLY:**

Public entities such as municipalities, counties, special purpose districts, Indian tribes, and corporations not operated for profit.

### **APPLICATION CRITERIA:**

Grants may not exceed 75 percent of the eligible project costs. Priority will be given to public entities in areas smaller than 5,500 people to restore a deteriorating water supply, or to improve, enlarge or modify a water facility or an inadequate waste facility.

### **PROVIDED BY:**

U.S. Department of Agriculture - Rural Development Administration.

Annual funding level: \$12,147,000 is available in California.

Disbursement range: No defined range.

**CONTACT: CHARLES CLENDENIN,  
RURAL DEVELOPMENT ADMINISTRATION  
194 WEST MAIN STREET, SUITE F  
WOODLAND, CA 95695-2915  
(916) 668-2080**



## **RURAL BUSINESS ENTERPRISE GRANTS**

### **PURPOSE OF GRANT:**

Development of private businesses in rural areas.

### **DESCRIPTION OF THE PROGRAM:**

Grants are made to finance and facilitate development of small and emerging private business enterprises outside the boundary of a city with a population of 50,000 or more and its adjacent urbanized area. Funds may be used to help the development of small and emerging private business enterprises.

### **WHO MAY APPLY:**

Eligibility is limited to public bodies and private non-profit corporations. Public bodies include incorporated towns and villages, boroughs, townships, counties, states, authorities, districts, and Indian tribes on federal and state reservations and other federally-recognized Indian tribal groups in rural areas.

### **APPLICATION CRITERIA:**

Costs that may be paid from grant funds include: the acquisition and development of land and the construction of buildings; plants; equipment; access streets and roads; parking areas; utility and service extensions; refinancing fees; and technical assistance. Start-up costs and working capital grants may also be made to establish or fund a jurisdictions revolving loan programs.

### **PROVIDED BY:**

U.S. Department of Agriculture - Rural Development Administration.

Annual funding level: \$936,000 in California.

Disbursement range: No set range.

**CONTACT: CHARLES CLENDENIN,  
RURAL DEVELOPMENT ADMINISTRATION  
194 WEST MAIN STREET, SUITE F  
WOODLAND, CA 95695-2915  
(916) 668-2080**



## **RECYCLING, PUBLIC EDUCATION AND LITTER REDUCTION GRANT**

### **PURPOSE OF GRANT:**

Enhancing diversion programs, markets, and education.

### **DESCRIPTION OF THE PROGRAM:**

A Recycling, Public Education and Litter Reduction grant can be used to establish and/or develop markets for products using postconsumer material as feedstock, improve environmental education, and increase collection of recyclable materials. Matching funding sources are preferred.

### **WHO MAY APPLY:**

To qualify, applicants must be a governmental agency, including school districts, individual schools, special districts and joint powers authorities, or a non-profit organization.

### **APPLICATION CRITERIA:**

Grant funds can be requested for most expenses incurred in developing and carrying out a project, although some expenses are not recommended. These expenses include overhead or indirect costs and general operating expenses such as rent, utilities, office furnishings or supplies. In the case of collection programs, the Department will consider grant funds for equipment and services only. These expenses may include items such as recycling collection containers; collecting, processing, or handling equipment; storage containers; printing; and postage and professional design services, but not personnel costs. There are no restrictions as to what is requested in other project categories, but it is recommended that only equipment, services, and personnel costs be included.

### **PROVIDED BY:**

California Department of Conservation - Division of Recycling

Annual funding level: \$2,000,000.

Disbursement range: No set minimum or maximum - \$50-100,000 has been the historical high.

**CONTACT: BLANDA DUNCAN  
DIVISION OF RECYCLING  
801 K STREET  
SACRAMENTO, CA 95814  
(916) 323-8775**



## **DEVELOPMENTALLY DISABLED PROGRAM DEVELOPMENT FUND**

### **PURPOSE OF GRANT:**

The objective of this program is to provide the resources needed to initiate new community service programs for persons with developmental disabilities in California.

### **DESCRIPTION OF THE PROGRAM:**

Requests for proposals are available in the spring of each year from the local regional center. Proposals would contain a write-up of the needs of developmentally disabled persons that will be met by the project. To date these funds have not been used to help with waste management programs. However, analysts believed that programs that supported employment and vocationally related adult day programs in the field of solid waste could be eligible. They have reports of previously funded projects available for review.

### **WHO MAY APPLY:**

Non-profit public or private organizations.

### **PROVIDED BY:**

California Department of Developmental Services and State Council on Developmental Disabilities

Annual funding level: \$1,800,000 for 1992/93 funding cycle.

Disbursement range: \$333 to \$99,000.

**CONTACT: RITA LEFRIDGE  
DEPARTMENT OF DEVELOPMENTAL SERVICES  
1600 9TH STREET  
SACRAMENTO, CA 95814  
(916) 654-2203**



## **COMMUNITY DEVELOPMENT BLOCK GRANT/ECONOMIC DEVELOPMENT ALLOCATION**

### **PURPOSE OF GRANT:**

Job creation for low-income persons in rural communities.

### **DESCRIPTION OF THE PROGRAM:**

The goal of this program is to create or retain jobs for low-income persons in rural communities. The CDBG program makes non-competitive grants to jurisdictions who either loan the money to private businesses or use it to install publicly owned and operated infrastructure. Eligible activities for funding include those that create or retain jobs for low-income households, including working capital loans to businesses and developers; land acquisition; equipment loans; construction loans; etc. To date the economic development allocation has not received an application for waste management programs. However, analysts at the Department of Housing and Community Development believe that waste management programs could receive funding if they demonstrated potential to create or retain jobs for low-income people in rural communities.

### **WHO MAY APPLY:**

Cities with populations under 50,000 and counties with populations under 200,000 that do not participate in the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) entitlement program.

### **APPLICATION CRITERIA:**

Applicants must demonstrate a benefit for low to moderate-income people resulting from the proposed project.

### **PROVIDED BY:**

Federal Department of Housing and Community Development.

Annual funding level: \$3,000,000.

Disbursement range: Up to \$500,000 annually.

**CONTACT: WILLIAM J. PAVAO  
FEDERAL DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
1800 THIRD STREET  
SACRAMENTO, CA 95814  
(916) 327-8887**



## **COMMUNITY DEVELOPMENT BLOCK GRANT/COMMUNITY & ECONOMIC DEVELOPMENT PLANNING-TECHNICAL ASSISTANCE ALLOCATION**

### **PURPOSE OF GRANT:**

Community economic, housing, and community development projects.

### **DESCRIPTION OF THE PROGRAM:**

The goal of this program is to help small communities to assess the feasibility, or plan for economic, housing, and community development projects. Eligible activities include economic, housing and community project feasibility studies for activities that meet overall CDBG, objectives including the provision that moderate and low-income persons must benefit from the project.. The grant is non-competitive and the jurisdiction must provide a cash match of 1-25% of the grant amount.

### **WHO MAY APPLY:**

Cities with populations of less than 50,000 and counties with populations of less than 200,000 that do not participate in the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) entitlement program.

### **APPLICATION CRITERIA:**

Applicants must demonstrate how a benefit for low to moderate-income people will occur if the proposed planning activity results in project implementation..

### **PROVIDED BY:**

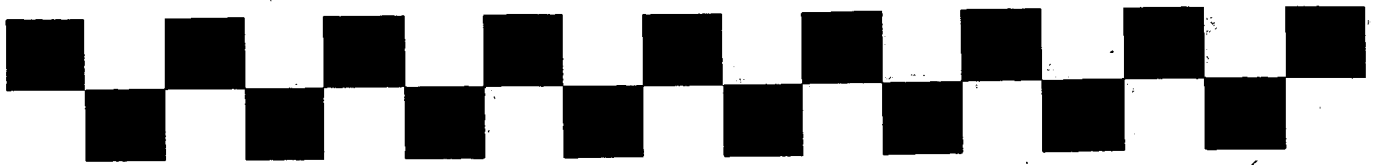
Federal Department of Housing and Community Development.

Annual funding level: \$1,000,000.

Disbursement range: Up to \$30,000 per annual grant.

Example: To date four jurisdictions have received funds under the Community & Economic Development Planning-Technical Assistance Allocation program for recycling feasibility studies.

**CONTACT: WILLIAM J. PAVAO  
FEDERAL DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT.  
1800 THIRD STREET  
SACRAMENTO, CA 95814  
(916) 327-8887**



## **LOANS**



## **COMMUNITY DEVELOPMENT BLOCK GRANT/REVOLVING LOAN FUND**

### **PURPOSE OF GRANT:**

Job creation for low-income persons in rural communities.

### **DESCRIPTION OF THE PROGRAM:**

The CDBG program gives competitive grants to jurisdictions to establish revolving loan funds. Eligible activities for funding include those that create or retain jobs for low-income households including; working capital loans to businesses and developers; land acquisition; equipment loans; construction loans, etc. To date the economic development allocation has not received an application for waste management programs. However, analysts at the Department of Housing and Community Development believe that waste management programs could receive funding if they demonstrated potential to create or retain jobs for low-income people in rural communities.

### **WHO MAY APPLY:**

Cities with populations of less than 50,000 and counties with populations of less than 200,000 that do not participate in the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) entitlement program.

### **APPLICATION CRITERIA:**

Applications must include a program design and show how low-to-moderate-income people will benefit. The applicant must submit an application describing the emphasis of the proposed revolving loan fund e.g. startups, enterprise zones, business retention or revitalization, industrial parks, etc.

### **PROVIDED BY:**

Federal Department of Housing and Community Development.

Annual funding level: \$6,000,000.

Disbursement range: Up to \$500,000 annually.

**CONTACT: WILLIAM J. PAVAO  
FEDERAL DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT.  
1800 THIRD STREET  
SACRAMENTO, CA 95814  
(916) 327-8887**



## **COMMUNITY DEVELOPMENT BLOCK GRANT/REVOLVING LOAN FUND**

### **PURPOSE OF GRANT:**

Job creation for low-income persons in rural communities.

### **DESCRIPTION OF THE PROGRAM:**

The CDBG program gives competitive grants to jurisdictions to establish revolving loan funds. Eligible activities for funding include those that create or retain jobs for low-income households including; working capital loans to businesses and developers; land acquisition; equipment loans; construction loans, etc. To date the economic development allocation has not received an application for waste management programs. However, analysts at the Department of Housing and Community Development believe that waste management programs could receive funding if they demonstrated potential to create or retain jobs for low-income people in rural communities.

### **WHO MAY APPLY:**

Cities with populations of less than 50,000 and counties with populations of less than 200,000 that do not participate in the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) entitlement program.

### **APPLICATION CRITERIA:**

Applications must include a program design and show how low-to-moderate-income people will benefit. The applicant must submit an application describing the emphasis of the proposed revolving loan fund e.g. startups, enterprise zones, business retention or revitalization, industrial parks, etc.

### **PROVIDED BY:**

Federal Department of Housing and Community Development.

Annual funding level: \$6,000,000.

Disbursement range: Up to \$500,000 annually.

**CONTACT: WILLIAM J. PAVAO  
FEDERAL DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT.  
1800 THIRD STREET  
SACRAMENTO, CA 95814  
(916) 327-8887**



## **COMMUNITY FACILITY LOANS**

### **PURPOSE OF LOAN:**

*Development of community facilities.*

### **DESCRIPTION OF PROGRAM:**

*Community Facility Loans can be used to develop community facilities for public use in rural areas and towns of not more than 20,000 people. Loan funds may be used to construct or enlarge or improve community facilities for health care, public safety, and public services. Public service facilities include community buildings, courthouses, public maintenance buildings, libraries, schools, industrial parks, roads, bridges, airports and fairgrounds; this would also include the acquisition of interest in lands, leases and rights-of-way necessary to develop the facilities. Loan funds may also be used for equipment necessary for the operation of these facilities. Its applications to waste management programs according to the Rural Development Administration may include the construction and upkeep of roads leading to and from municipal solid waste landfills, and landfill closure mitigation measures to secure public safety.*

### **WHO MAY APPLY:**

*Municipalities, counties, special purpose districts, non-profit corporations, and Indian tribes, with not more than 20,000 population.*

### **APPLICATION CRITERIA:**

*Non-profit corporations and Indian tribes may receive loan assistance when adequate plans for loan repayment are made. In addition, borrowers must: be unable to obtain needed funds from other sources at reasonable rates and terms; have the legal authority to borrow and repay loans; be able to pledge security for loans; be able to continue to operate the facilities or services; and be financially sound.*



**PROVIDED BY:**

U.S. Department of Agriculture; Rural Development Administration

Annual funding level: \$5,703,000 available in California:

Disbursement range: No set range.

**CONTACT: CHARLES CLENDENIN  
RURAL DEVELOPMENT ADMINISTRATION  
194 WEST MAIN STREET, SUITE F  
WOODLAND, CA 95695-2915  
(916) 668-2080**



## **INTERMEDIARY RELENDING PROGRAM LOANS**

### **PURPOSE OF LOAN:**

Development or expansion of business facilities and community development projects and the creation of jobs.

### **DESCRIPTION OF PROGRAM:**

Loans must be used to finance business facilities and community development projects not within the outer boundary of any city having a population of 25,000 or more. This is achieved through loans made by RDA to intermediaries (financial institutions) that provide loans to ultimate recipients of business facilities and community development in a rural area.

### **APPLICATION CRITERIA:**

Any public or private organization or individual with experience operating a revolving loan fund may apply.

### **PROVIDED BY:**

U.S. Department of Agriculture; Rural Development Administration.

Annual funding level: \$100,000,000 available nationally.

Disbursement range: No set range.

**CONTACT: CHARLES CLENDENIN  
RURAL DEVELOPMENT ADMINISTRATION  
194 WEST MAIN STREET, SUITE F  
WOODLAND, CA 95695-2915  
(916) 668-2080**



## **WATER AND WASTE DISPOSAL LOANS**

### **PURPOSE OF LOAN:**

Loans may be used to construct, repair, improve, expand or otherwise modify waste collection, pumping, treatment, or other disposal facilities.

### **DESCRIPTION OF PROGRAM:**

Facilities to be financed may include such items as sewer lines, treatment plants including stabilization ponds, storm sewer facilities, sanitary landfills, incinerators, and necessary equipment. Loans may also be used to pay necessary fees, such as legal and engineering fees associated with the development of the facilities and other costs related to the development of the facility, including the acquisition of rights-of-way and easements, and the relocation of roads and utilities. Loans may be used to finance facilities, together with funds from other agencies or those provided by the applicant.

### **WHO MAY APPLY:**

Public entities such as municipalities, counties, special purpose districts, Indian Tribes and non-profit corporations.

### **APPLICATION CRITERIA:**

Priority will be given to public entities in areas smaller than 5,500 people to restore a deteriorating water supply, or to improve, enlarge or modify a water facility or an inadequate waste facility. Borrowers must be unable to obtain needed funds from other sources at reasonable rates and terms. The borrowers also must have the legal authority to borrow and repay loans, and the ability to pledge security for loans and to construct, operate and maintain the facilities or services. They must be financially sound, and able to organize and manage the facility effectively. The facility must also be financially sound, based on taxes, assessments, revenues, fees or other satisfactory sources of income, to pay all facility costs, including operation and maintenance, and to retire the indebtedness and maintain a reserve.



**PROVIDED BY:**

U.S. Department of Agriculture; Rural Development Administration.

Annual funding level: \$22,494,000 available in California.

Disbursement range: No set range.

**CONTACT: CHARLES CLENDENIN  
RURAL DEVELOPMENT ADMINISTRATION  
194 WEST MAIN STREET, SUITE F  
WOODLAND, CA 95695-2915  
(916) 668-2080**



## **ENERGY TECHNOLOGIES ADVANCEMENT PROGRAM**

### **PURPOSE OF LOAN:**

To promote energy generation or conservation projects.

### **DESCRIPTION OF PROGRAM:**

The Energy Technologies Advancement Program (ETAP) provides co-funding for energy hardware research, development, and demonstration projects. Projects must increase the energy efficiency of existing energy technologies, increase their cost-effectiveness, or develop new, cost-effective alternative sources of energy. Typical loans are over \$40,000 and under \$300,000.

### **WHO MAY APPLY:**

California businesses - a minimum of ten percent is reserved for local jurisdictions, special districts and Indian tribes.

### **APPLICATION CRITERIA:**

Nearly every type of energy technology is eligible for co-funding under this program, including energy generation projects, energy conservation or load management projects, and energy-related recycling projects. Matching funds are required for all contracts awarded under the ETAP.

### **PROVIDED BY:**

California Energy Commission.

Annual funding level: \$1,000,000 to \$4,000,000.

Disbursement range: Maximum of 25 percent of annual funding.

Example: ETAP recently awarded a \$250,000 repayable research contract to the Yolo County Department of Public Works for methane enhancement by accelerated anaerobic composting at the Yolo County central landfill. For additional information contact Ramin Yazdani of the Yolo County Department of Public Works at (916) 757-5577.

**CONTACT: NANCY LIBONATI  
CALIFORNIA ENERGY COMMISSION  
1516 9TH STREET  
SACRAMENTO, CA 95814  
(916) 654-4615**



## **CALIFORNIA LOANS FOR ENVIRONMENTAL ASSISTANCE NOW**

### **PURPOSE OF LOAN:**

Upgrading pollution controls for private companies.

### **DESCRIPTION OF PROGRAM:**

The purpose of this program is to provide California businesses with a reasonable method of financing pollution control and resource recovery facilities. The program enables private companies to use funds received from the sale of California Pollution Control Financing Authority bonds for the acquisition, construction, or installation of pollution control and resource recovery facilities (which can be waste management facilities) to meet environmental requirements imposed by public agencies. Loan borrowers are charged a 2 percent loan origination fee.

### **WHO MAY APPLY:**

Private companies and corporations with less than 500 employees.

### **APPLICATION CRITERIA:**

Eligible projects must reduce air emissions and contaminants

### **PROVIDED BY:**

California Pollution Control Financing Authority.

Annual funding level: Currently there is no cap.

Disbursement range: \$10,000 - 750,000.

**CONTACTS: SHERRI WAHL/ KEITH SEEGMILLER/ JAMES GOLDSTONE  
CALIFORNIA POLLUTION CONTROL FINANCING AUTHORITY  
915 CAPITOL MALL, ROOM 466 (95814)  
P.O. BOX 942809  
SACRAMENTO, CA 94209-0001  
(916) 654-5610**



## **CAPITAL ACCESS PROGRAM**

### **PURPOSE OF LOAN:**

The Capital Access Program is designed to increase the availability of loans from banks to small businesses that carry a higher than normal risk.

### **DESCRIPTION OF LOAN PROGRAM:**

The purpose of this program is to provide California businesses with a reasonable method of financing pollution control and resource recovery facilities (which can be waste management facilities). This program is directed toward businesses that have an impact on the environment. The loans are guaranteed by a reserve fund consisting of premiums paid by the borrower, the lender, and the Authority. The program is non-bureaucratic in that the loans are made between the borrower and the bank with no involvement from the Authority. The amount of the borrower's contribution to the reserve fund is determined by the lender and is based on risk, but cannot exceed 3 percent.

A jurisdiction would probably not use this program directly, but they could encourage their local banks to participate.

### **WHO MAY APPLY:**

Private companies and corporations with less than 500 employees.

### **APPLICATION CRITERIA:**

This is a new program. The California Pollution Control Financing Authority expects emergency regulations to be in effect by the end of April.

### **PROVIDED BY:**

California Pollution Control Financing Authority.

Annual funding level: Currently there is no cap.

Disbursement range: The minimum is set by the local bank, the maximum is \$2.5 million.

**CONTACTS: SHERRI WAHL/ KEITH SEEGMILLER/ JAMES GOLDSTONE  
CALIFORNIA POLLUTION CONTROL FINANCING AUTHORITY  
915 CAPITOL MALL, ROOM 466 (95814)  
P.O. BOX 942809  
SACRAMENTO, CA 94209-0001  
(916) 654-5951**



## **POLLUTION CONTROL & WASTE DISPOSAL FACILITIES SMALL BUSINESS ASSISTANCE FUND**

### **PURPOSE OF LOAN:**

Financing pollution control and resource recovery facilities.

### **DESCRIPTION OF PROGRAM:**

The purpose of this program is to provide California businesses with a reasonable method of financing pollution control and resource recovery facilities. The program enables private companies to borrow money using tax-exempt debt to finance eligible pollution control and solid waste recovery facilities. The Authority provides financial assistance for issuance and credit support because costs of issuing this type of debt can be very high.

### **WHO MAY APPLY:**

Private companies and corporations with less than 500 employees.

### **APPLICATION CRITERIA:**

The project must qualify as a solid waste processing or disposal facility by federal guidelines. There is a small application fee.

### **PROVIDED BY:**

California Pollution Control Financing Authority.

Annual funding level: Currently there is no cap.

Disbursement range: \$750,000 - 10,000,000.

**CONTACTS: SHERRI WAHL/ KEITH SEEGMILLER/ JAMES GOLDSTENE  
CALIFORNIA POLLUTION CONTROL FINANCING AUTHORITY  
915 CAPITOL MALL, ROOM 466 (95814).  
P.O. BOX 942809  
SACRAMENTO, CA 94209-0001  
(916) 654-5610**



## **RECYCLING MARKET DEVELOPMENT ZONE (RMDZ) LOAN PROGRAM**

### **PURPOSE OF LOAN:**

To increase demand for secondary materials and thereby assist local governments to achieve waste diversion goals. Loans are only available within designated RMDZs.

### **DESCRIPTION OF PROGRAM:**

The RMDZ loan program is a direct lending program which can fund up to 50% of a proposed project, up to a maximum of \$1 million. Loans are fully secured, and may be used by local governments for publicly owned infrastructure and capital improvements located within an RMDZ which directly support businesses that use secondary materials to produce new products. Loans may be used by private businesses and non-profit organizations for any project which increases demand for secondary materials. For private-sector borrowers, loan funds may be used for machinery and equipment, working capital, land or refinancing of current debt.

### **WHO MAY APPLY:**

Local jurisdictions, businesses and non-profit organizations located within a designated RMDZ.

### **APPLICATION CRITERIA:**

Loan applications are accepted quarterly, and must include a variety of information documenting the proposed project, financial soundness of the borrower and sources of collateral to secure the loan.

### **PROVIDED BY:**

California Environmental Protection Agency - CIWMB.

Annual funding level: \$5,000,000.

Disbursement range: 50 percent of the cost of a project with a maximum of \$1,000,000.

**CONTACT: EDWARD BOISSON  
CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD  
8800 CAL CENTER DRIVE  
SACRAMENTO, CA 95826  
(916) 255-2708**



## **COMMUNITY FACILITY GUARANTEED LOANS**

### **PURPOSE OF LOAN GUARANTEE:**

Development of essential community facilities.

### **DESCRIPTION OF PROGRAM:**

Loans may be guaranteed up to 90 percent of the loss of principal and interest on a loan. Normally, guarantees will not exceed 80 percent unless extraordinary circumstances exist. Funds guaranteed under this program may be used to construct, enlarge or otherwise improve water and waste disposal and other essential community facilities. This can include costs to acquire interest in land, leases and rights-of-way necessary to develop the facility. Funds may also be used for necessary equipment for the operation of the facility.

### **WHO MAY APPLY:**

Those borrowing funds under this program must be a public entity such as a municipality, county, or special purpose district; a non-profit corporation; or an Indian tribe. Application criteria: The borrower must have the legal authority to borrow and repay the loan and meet all requirements of the loan. Applicants for the loan must be unable to obtain the loan, at reasonable rates and terms, from private or cooperative lending institutions without the guarantee.

### **PROVIDED BY:**

U.S. Department of Agriculture, Rural Development Administration.

Annual funding level: \$1,446,000 in California.

Disbursement range: No set range.

**CONTACT: CHARLES CLENDENIN  
RURAL DEVELOPMENT ADMINISTRATION  
194 WEST MAIN STREET, SUITE F  
WOODLAND, CA 95695-2915  
(916) 668-2080**



## **WATER AND WASTE DISPOSAL LOAN GUARANTEES**

### **PURPOSE OF THE LOAN GUARANTEE:**

To help rural areas improve water and waste facilities.

### **DESCRIPTION OF THE PROGRAM:**

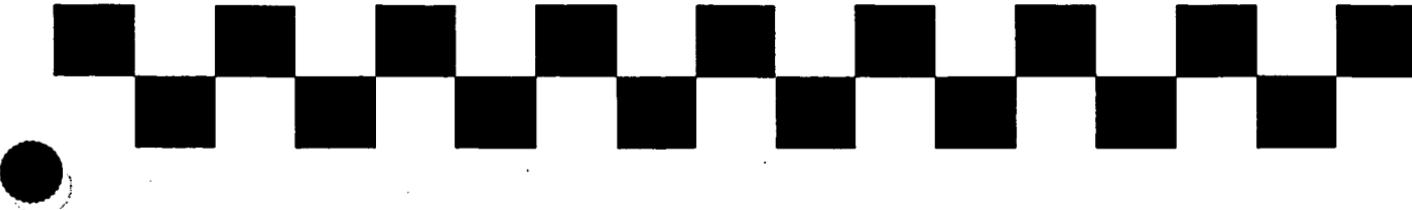
Loans may be used to construct, repair, improve, expand or otherwise modify waste collection, pumping, treatment or other disposal facilities. Facilities to be financed may include: sewer lines, treatment plants including stabilization ponds, storm sewer facilities, sanitary landfills, incinerators, and necessary equipment. Loans may also be used to pay necessary fees, such as legal and engineering fees associated with the development of the facility and other costs related to the development of the facility including the acquisition of rights-of-way and easements and the relocation of roads and utilities. Loans may be used to finance facilities, together with funds from other agencies or those provided by the applicant.

### **WHO MAY APPLY:**

Public entities such as municipalities, counties, special purpose districts, Indian tribes, and corporations not operated for profit.

### **APPLICATION CRITERIA:**

Priority will be given to public entities in areas smaller than 5,500 people to restore a deteriorating water supply, or to improve, enlarge or modify a water facility or an inadequate waste facility. In addition, borrowers must be unable to obtain needed funds from other sources at reasonable rates and terms and have the legal authority to borrow and repay loans and to pledge security for loans. Borrowers also must be able to construct, operate and maintain the facilities or services, be financially sound and be able to organize and manage the facility effectively. The facility must be financially sound, based on taxes, assessments, revenues, fees or other satisfactory sources of income and able to pay all facility costs, including operation and maintenance, and to retire the indebtedness and maintain a reserve.



**PROVIDED BY:**

U.S. Department of Agriculture, Rural Development Administration.

Annual funding level: \$35,250,000 available nationally.

Disbursement range: No set range.

**CONTACT: CHARLES CLENDENIN  
RURAL DEVELOPMENT ADMINISTRATION  
194 WEST MAIN STREET, SUITE F  
WOODLAND, CA 95695-2915  
(916) 668-2080**



## GLOSSARY

**Agricultural Wastes** - Solid wastes of plant and animal origin, which result from the production and processing of farm or agricultural products, including manures, orchard and vineyard prunings, and crop residues, which are removed from the site of generation for solid waste management.

**Aluminum Cans** - any food or beverage container that is composed of at least 94% aluminum.

**Bi-Metal Container** - Any metal container composed of at least two different types of metals, such as a steel container with an aluminum top.

**Block Grant** - A type of federal or state aid made available to states, cities, or counties (a federal block grant) or by a state (a state block grant) to cities and/or counties for improving community services such as education or health and safety programs.

**Buy Back Center** - A central point for collecting specific recyclables where cash payments are given; some materials may be accepted without payment. The material is subsequently processed for delivery to market.

**Buyback Facility** - See buy back center.

**Capital Costs** - Those direct costs incurred in order to acquire real property assets such as land, buildings and building additions; site improvements; machinery; and equipment.

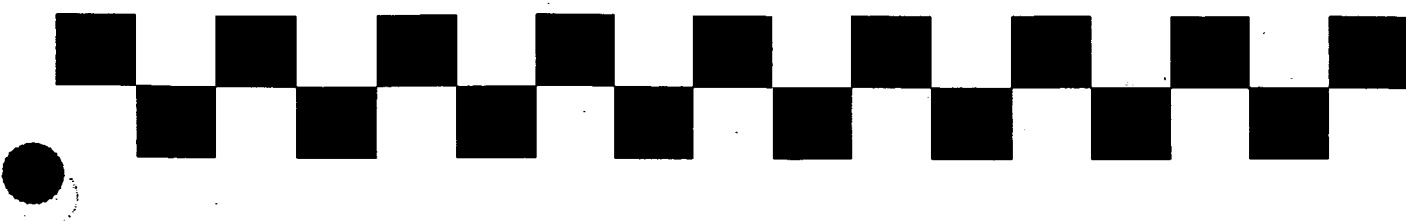
**Co-Compost** - The product of simultaneous composting of two or more compost feedstocks types, often including sewage sludge and green materials or mixed solid waste.

**Commercial Solid Waste** - Solid waste originating from stores, business offices, commercial warehouses, hospitals, educational, health care, military, and correctional institutions, non-profit research organizations, and government offices. Commercial solid wastes do not include construction and demolition waste.

**Compost** - The stable humus or soil-like end product of decomposition.

**Compostable** - Organic material, such as food, yard trimmings, sludge, manure, or mixed waste paper that can be composted (i.e., will readily undergo biological decomposition when subjected to moisture and air at temperatures conducive to biological growth). **Composting** - Composting, nature's way of recycling, is the biological decomposition of organic debris such as leaves, grass clippings, fruit and vegetable trimmings, and other organic material commonly found in municipal wastes.

**Composting Facility** - A facility at which composting is conducted and which produces a product meeting the definition of "compost".



**Corrugated Container** - A paperboard container fabricated from two layers of kraft linerboard sandwiched around a corrugating medium. Corrugating medium means paperboard made from chemical or semi-chemical wood pulps, straw or reclaimed paper stock, and folded to form permanent corrugations.

**Curbside Collection** - A residential service for collection of recyclable materials, where residents place their recyclables on the curb (or, for multi-family dwellings, in centrally located receptacles) for collection.

**Disposal** - The management of solid waste through landfilling or transformation at permitted solid waste facilities.

**Dropoff Recycling Center** - A central point for collecting recyclable or compostable materials. Materials are taken by individuals to the dropoff center and deposited into designated containers or areas at no fee.

**Durability** - The ability of a product to be used for its intended purpose for a period greater than the mean useful product lifespan of similar products.

**End Market** - The use or uses of a diverted material or product which has been returned to the economic mainstream, whether or not this return is through sale of the material or product. The or product can have a value which is less than the solid waste disposal costs.


**End-User** - A manufacturer that consumes secondary materials to use as feedstock in the production of consumer goods.

**Ferrous Metal** - Any iron or steel scrap which has an iron content sufficient for magnetic separation.

**Grasscycling** - The waste prevention practice of leaving grass clippings on a lawn while mowing instead of collecting them for disposal.

**Green Material** - Any wastes separated at their source of generation which are derived from plant material, including, but not limited to, leaves, grass clippings, weeds, tree trimmings, untreated wood waste, or shrubbery cuttings. Green material does not include plant material that is classified as food material.

**HDPE** - A plastic resin (high-density polyethylene) used in the manufacture of consumer products, such as: bottles for milk, water, juice, bleach and detergents, and motor oils; and margarine tubs. Also used in landfill liners and landfill caps. **Inert Waste (Inerts)** - A solid waste that does not in itself pose a threat to the environment. Examples include: rock, concrete, brick, sand, soil, asphalt, drywall, and unsorted construction and demolition waste.



**Integrated Waste Management (IWM)** - A holistic approach to waste resource management that focuses on the generation and handling of waste using a hierarchy of preferred options that include: waste prevention (source reduction); recycling and composting; transformation; and finally, land disposal.

**Intermediate Processing Facility** - A facility where source-separated, co-mingled recyclables are sorted and processed, by hand or by use of machinery, for the purposes of recycling.

**Landfill** - A disposal site designed and constructed to protect the public health, safety, and the environment from the hazards associated with the disposal.

**Local Task Force** - Convened every five years by each county, which is not a city and county, to assist in coordinating the development of city source reduction and recycling elements (SRRE), county SRREs, and countywide siting elements.

**Materials Exchange** - A service through a catalog or database with public access to businesses, schools, and/or other institutions used to advertise valuable materials that might have otherwise been discarded; or to request materials for reuse, recycling, or manufacturing feedstock.

**Material Recovery Facility (MRF)** - A solid waste facility where secondary materials are separated and sorted from mixed refuse, by hand or by use of machinery, for the purposes of recycling, composting, or transformation.

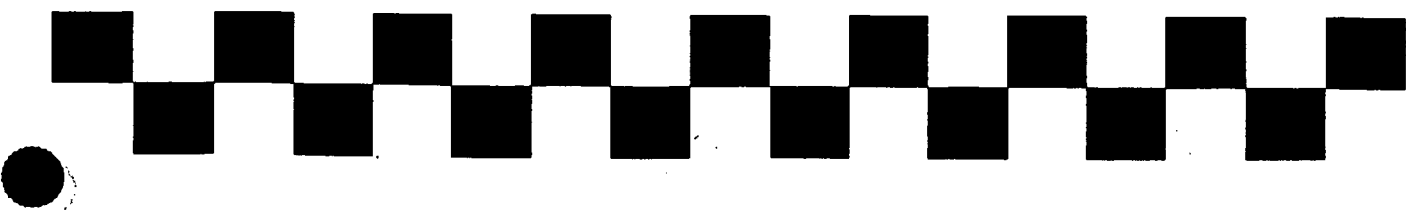
**Mulching** - The practice of layering organic material (usually shredded yard trimmings, straw, decorative bark, or compost) on top of the ground to insulate and protect it from erosion, temperature extremes, moisture loss, and weed growth.

**Municipal Solid Waste (MSW)** - Solid waste generated at residences, commercial establishments, and institutions. In California, MSW includes construction and demolition debris and automobile scrap. The United States Environmental Protection Agency does not include these materials.

**Non-ferrous metals** - Any metal scraps that are derived from metals other than iron and its alloys in steel, such as aluminum, copper, brass, bronze, lead, and zinc, and to which a magnet will not adhere.

**PETE** - A plastic resin (polyethylene terephthalate) used primarily in the manufacture of soda bottles and other packaging applications (e.g., edible oil and peanut butter containers).

**Price Preference** - In the context of recycled products procurement, an additional amount paid compared to the lowest bid or price quoted by suppliers offering non-recycled products. The maximum price differential price allowed is usually defined as a percentage of the lowest bid or price quoted by suppliers offering non-recycled products. Usually applies only to federal, state and local government agency procurement.



**Procurement** - In the context of integrated waste management, the purchase of recycled-content products in an attempt to expand the market demand for these materials, thereby providing an economic incentive to divert materials from disposal.

**Purchase Preferences** - In the context of recycled products procurement, procedures and specifications which favor purchase of recycled products in lieu of comparable non-recycled products, when the recycled products meet applicable quality and availability requirements, and do not cost more than the comparable non-recycled products. Usually applies only to federal, state, and local government agency procurement.

**Regional Agency** - The governing entity created by a voluntary agreement between cities and/or counties to cooperatively work on programs.

**Regionalization** - An integrated waste management (IWM) option that results in two or more jurisdictions within a specific region sharing facilities, equipment, labor, transportation, and/or management.

**Resource Recovery** - The retrieval and use of materials from the waste stream. These recovered materials can be used in the manufacturing of new recycled materials or products, converted into some form of fuel for energy recovery, or are utilized directly in a transformation process for energy recovery.

**Rigid Plastic Packaging Containers** - A plastic package having a relatively inflexible finite shape or form, with a capacity of between eight ounces and five gallons (or equivalent volumes), and that is capable of maintaining its shape while holding other products (e.g., bottles, cartons).

**Secondary Material** - Recyclable material that, after having undergone requisite processing, can be used as a substitute for primary raw material in product manufacturing.

**Shredded Tire** - A whole tire reduced to rubber strips, between one inch and six inches wide.


**Sludge (Biosolid), Drinking Water Treatment** - Any residue removed from fresh water (drinking water), whether in a dry, semi-dry, or liquid form.

**Sludge (Biosolid), Sewage** - A solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

**Solid Waste Facility (SWF)** - A facility which transfers, treats, processes, composts, transforms, or disposes solid waste.

**Source Reduction** - See "Waste Prevention".

**Source Separated** - Recyclable or compostable materials segregated from other materials in the waste stream at the point of generation.

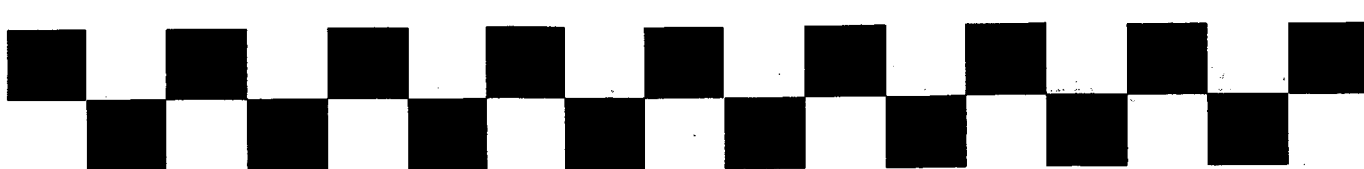


**Transfer Station** - A facility where waste materials or recyclables are taken from smaller collection vehicles and put into larger units for transit to disposal sites. Some sorting and separation of recyclables may take place.

**Transformation** - Processes including incineration, pyrolysis, distillation, gasification, or biological conversion other than composting.

**Waste Prevention (Source Reduction)** - Any action undertaken by an individual or organization to eliminate or reduce the amount or toxicity of materials before they enter the municipal solid waste stream. This action is intended to conserve resources, promote efficiency, and reduce pollution.

**Waste Reduction** - The combined efforts of waste prevention (which includes reuse), composting, and recycling practices.



## Waste Types

Aluminum

Antifreeze

Batteries

Car Batteries

Cardboard

## INDEX

### Programs

Schuller International Manufacturing  
Restaurant Recycling  
Private Materials Recovery Facility  
School Recycling: Mendocino, Calif.  
School Recycling & Waste Prevention: Placer,  
School Recycling: Humboldt, Calif.  
School Recycling: Siskiyou, Calif.  
School Recycling: Etna, Calif.  
School Recycling: Alpine, Calif.  
School Recycling: San Andreas, Calif.  
Community Recycling: Molokai, Hawaii  
Community Recycling: Imperial, Nebraska  
Dropoff Facility  
Town Recycling Center  
One-Stop Drop Off & Processing of Recyclables  
Regional Recycling Program  
13-County Regional Recycling Program  
Non-Profit Regional Recycling Center  
Private Recycling/Processing Facility  
Regional Recycling & Cooperative Marketing  
Regional Recycling & Cooperative Marketing  
One-Stop Dropoff And Processing Recyclables  
Regional Recycling/Processing Facility  
Collection Events: Humboldt County, Calif.  
Collection Events: El Dorado County, Calif.  
Permanent Collection Facility: Merced  
School Recycling: San Andreas, Calif.  
Collection Events: Greenfield, Mass.  
Community Recycling: Imperial, Nebraska  
School Recycling: Penn Valley, Calif.  
Manufacturing  
Concrete Additives



Schuller International Manufacturing  
Private Materials Recovery Facility  
School Recycling: Laytonville, Calif.  
School Recycling & Waste Prevention: Placer  
School Recycling: Kneeland, Calif.  
School Recycling: San Andreas, Calif.  
Prison Recycling  
Community Recycling: Malokai, Hawaii  
Community Recycling: Imperial, Nebraska  
Dropoff Facility  
Regional Recycling Program  
Bi-County Transfer-Recycling Facility  
Non-Profit Regional Recycling Center  
Private Recycling/Processing Facility  
Regional Recycling & Cooperative Marketing  
Restaurant Recycling  
Yakima Products Manufacturing  
MRF/Disabled Citizens Work Program

#### Chemicals

Newspaper Office  
County Courthouse & Garage Waste Prevention

#### Chipboard

School Recycling: San Andreas, Calif.

#### Christmas Trees

Christmas Tree Recycling

#### Crab & Fish Waste

Crab & Fish Waste Composting  
Crab Waste Composting

#### Disposable Items

County Courthouse & Garages  
Hospital  
School Recycling: Kneeland, Calif.

#### Gardening Pots

Nursery Reuse

#### Ferrous Metals

Town Recycling Center

#### Food Waste

Schuller International Manufacturing  
Restaurant Recycling  
Food Waste Recovery/Hog Feeding  
School Recycling: Laytonville, Calif.  
School Recycling & Waste Prevention: Placer  
School Recycling: Etna, Calif.  
Town Recycling Center



**Glass**

Mixed Waste Composting

Concrete Additives

Fair Recycling

Restaurant Recycling

Private Materials Recovery Facility

School Recycling & Waste Prevention: Placer

School Recycling: Kneeland, Calif.

School Recycling: Etna, Calif.

School Recycling: Markleeville, Calif.

School Recycling: San Andreas, Calif.

School Recycling: Laytonville, Calif.

Community Recycling: Malokai, Hawaii

Community Recycling: Imperial, Nebraska

Dropoff Facility

Town Recycling Center

One-Stop Dropoff & Processing of Recyclables

Regional Recycling Program

13-County Regional Recycling

Bi-County Transfer-Recycling Facility

Non-Profit Regional Recycling Center

Private Recycling/Processing Facility

Regional Recycling & Cooperative Marketing

Glass Recycling to Tile Products

MRF/Disabled Citizens Work Program

**Greetings Cards**

Holiday/Greeting Card Use

**Ink**

Newspaper Office

**Junk Mail**

County Courthouse & Garages

Manufacturing

Community Recycling: Imperial, Nebraska

One-Stop Dropoff & Processing of Recyclables

Mixed Waste Composting

**Leaves**

Mixed Waste Composting

**Magazines**

Restaurant Recycling

School Recycling: Kneeland, Calif.



## Manure

Community Recycling: Malokai, Hawaii  
Community Recycling: Imperial, Nebraska  
Regional Recycling & Cooperative Marketing  
One-Stop Dropoff & Processing of Recyclables

## Mattresses

Fair Recycling  
Animal Newspaper Bedding

## Metals

Prison Recycling  
Hospital  
Schuller International Manufacturing  
Yakima Products Manufacturing  
Prison Recycling  
MRF/Disabled Citizens Work Program  
One-Stop Dropoff & Processing of Recyclables  
Town Recycling  
Community Recycling: Imperial, Nebraska

## Milk Cartons

School Recycling: Laytonville, Calif.  
School Recycling & Waste Prevention: Placer  
Prison Recycling  
Restaurant Recycling  
Hospital  
MSW Reduced Volume-Based Trash Disposal Fee

## Newspaper

Concrete Additives  
Restaurant Recycling  
Private Materials Recovery Facility  
Newsprint Remanufacturing  
Animal Newspaper Bedding  
School Recycling: Kneeland, Calif.  
School Recycling: Montague, Calif.  
School Recycling: San Andreas, Calif.  
Community Recycling: Malokai, Hawaii  
Community Recycling: Imperial, Nebraska  
One-Stop Dropoff & Processing of Recyclables  
13-County Regional Recycling Program  
Bi-County Transfer-Recycling Facility  
Non-Profit Regional Recycling Center  
Regional Recycling & Cooperative Marketing



	Retail Waste Prevention MRF/Disabled Citizens Work Program Cow Mattresses
Non-Ferrous Metals	Community Recycling: Imperial, Nebraska
Paint	County Courthouse & Garages Fair Recycling Collection Event: Greenfield, Mass. Collection Event: Humboldt, Calif. Collection Event: El Dorado County, Calif. Permanent Collection Facility: Merced
Packaging	Manufacturing Retail Waste Prevention Yakima Products Manufacturing One-Stop Dropoff & Processing of Recyclables
Pallets	Manufacturing Schuller International Manufacturing
Paper	County Courthouse & Garages Manufacturing Hospital Newspaper Office Yakima Products Manufacturing Fair Recycling — — — Private Materials Recovery Facility School Recycling & Waste Prevention: Placer School Recycling: Kneeland, Calif. School Recycling: Montague, Calif. School Recycling: Etna, Calif. School Recycling: Penn Valley, Calif. School Recycling: San Andreas, Calif. School Recycling: Laytonville, Calif. Community Recycling: Malokai, Hawaii Community Recycling: Imperial, Nebraska Dropoff Facility Town Recycling Center Prison Recycling Non-Profit Regional Recycling Center Regional Recycling & Cooperative Marketing

Phone Books

Pine Needles

Plastic

Polystyrene

Salvage/Reusables

Scrap Steel

Slick Paper

Textiles

Mixed Waste Composting  
One-Stop Dropoff & Processing of Recyclables  
MRF/Disabled Citizens Work Program

Concrete Additives

Pine Needle Diversion

County Courthouse & Garages

Hospital

Concrete Additives

Schuller International Manufacturing

Fair Recycling

Restaurant Recycling

Private Materials Recovery Facility

School Recycling & Waste Prevention: Placer

School Recycling: Kneeland, Calif.

School Recycling: Montague, Calif.

School Recycling: Etna, Calif.

School Recycling: Markleeville, Calif.

School Recycling: San Andreas, Calif.

Community Recycling: Malokai, Hawaii

Community Recycling: Imperial, Nebraska

Dropoff Facility

Town Recycling Center

One-Stop Dropoff & Processing of Recyclables

Regional Recycling Program

Bi-County Transfer-Recycling Facility

Retail Waste Prevention

One-Stop Drop Off & Processing of Recyclables

Yakima Products Manufacturing

"Drop & Swap"-Reuse Event

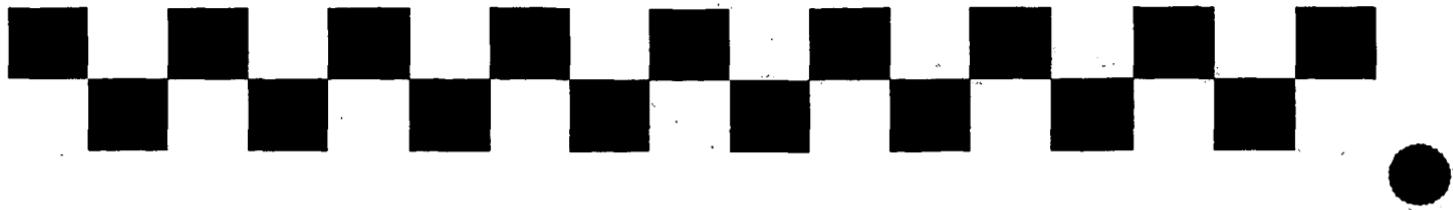
School Recycling: San Andreas, Calif.

School Recycling: San Andreas, Calif.

Community Recycling: Imperial, Nebraska

Prison Recycling

Town Recycling Center



**Tin Cans**

Restaurant Recycling  
Private Materials Recovery Facility  
School Recycling: San Andreas, Calif.

Community Recycling: Malokai, Hawaii  
Community Recycling: Imperial, Nebraska  
Dropoff Facility  
One-Stop Dropoff & Processing of Recyclables  
Regional Recycling Program  
Bi-County Transfer-Recycling Facility  
Non-Profit Regional Recycling Center  
Regional Recycling & Cooperative Marketing  
Town Recycling Center

**Tires**

Cow Mattresses  
School Recycling & Waste Prevention: Placer

**Toner Cartridges**

Newspaper Office

**Used Oil**

Community Recycling: Imperial, Nebraska  
Dropoff Facility  
Regional Recycling & Cooperative Marketing  
Collection Event: Greenfield, Mass.  
Collection Event: Humboldt County, Calif.  
Collection Event: El Dorado County, Calif.  
Collection Event: Merced County, Calif.

**Wood**

Concrete Additives  
Prison Recycling

**Yard Waste**

School Recycling & Waste Prevention: Placer  
School Recycling: Penn Valley  
Lawn Mulching  
Reduced Volume-Based Trash Disposal Fees  
Regional Recycling And Cooperative Marketing



## **APPENDIX**

This appendix includes a copy of CCR Section 18775 which outlines the eligibility of jurisdictions to receive a reduction in planning and diversion requirements. A copy of a successful petition from Lassen County is included along with the Board agenda item for your reference. The appendix was included to help guide those jurisdictions who will be unable to meet the mandated reductions of 25 percent by 1995 or 50 percent by the year 2000 and are eligible to petition the Board for reductions. For additional assistance in developing a petition please contact staff in the Office of Local Assistance.